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New Species of *Monolepta* CHEVROLAT from Borneo (Coleoptera, Chrysomelidae, Galerucinae)

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Abstract Seven new species of the genus *Monolepta* are described from Borneo: *M. borneensis* n. sp., *M. danumica* n. sp., *M. lambirica* n. sp., *M. limbangica* n. sp., *M. malaysiana* n. sp., *M. merah* n. sp. & *M. semifovea* n. sp. The male of these species are very peculiar in having the elytra with cavities near suture.

The new species of *Monolepta* herein described are those with the male having the elytra with cavities on the apical half, near suture. This is a peculiar characteristic in the galerucine beetles. The other genus which shares this characteristic is *Pseudocophora* JACOBY. Presently, from the six species of *Monolepta* described from Borneo none of them have the said elytral characteristic. This paper presents seven descriptions of new species of *Monolepta* from Borneo. All the type specimens are deposited in the Insect Collection, Department of Zoology, Universiti Kebangsaan Malaysia, Bangi (UKM). A key is provided for distinguishing the seven species.

Key to the species

1. Dorsal and ventral surfaces entirely reddish. Antennae and legs entirely black. Eyes large, with interocular space slightly narrower than the transverse diameter of each oculus. In male, elytron with fovea moderately deep, without any distinct tubercle; apical sternite with median lobe quadrate, its surface concave. Length 4.8-5.0 mm ………………………………………… *merah* n. sp.
— Dorsal and ventral surfaces not entirely reddish ………………………… 2
2. Eyes small, with interocular space nearly twice as broad as transverse diameter of each oculus. Pronotum transverse, 1.6 times as broad as long. Elytron yellowish,

with four silvery stripes; basal, lateral, apical and sutural margins black. In male, apical sternite with median lobe quadrate, its surface generally flat. Length 4.9–5.1 mm ······ *lambirica* n. sp.

— Eyes large, with interocular space slightly narrowed or subequal to transverse diameter of each oculus ······ 3

3. Pronotum transverse, 1.4–1.6 times as broad as long ······ 4

— Pronotum oblong, 1.2 times as broad as long ······ 6

4. Pronotum convex, yellowish. Elytron with basal, lateral, apical and sutural margins black or dark brown. Ventral surface of mesothorax black, or dark brown. Legs entirely brownish. In male, apical sternite with median lobe oblong, its surface longitudinally sulcate. In female, apical sternite broadly and deeply emarginate. Length 4.0–4.1 mm ······ *limbangica* n. sp.

— Pronotum depressed, reddish brown. Elytron with basal, lateral, apical and sutural margins brownish. Ventral surface of mesothorax brown ······ 5

5. Antennae entirely yellowish, except tips of the terminal segment blackish. Basal half of elytron brown, the apical half yellowish, with apex brownish. Legs black, except basal half of posterior femora brown. In male, apical sternite with median lobe quadrate, its surface generally flat. In female, apical sternite slightly emarginate. Length 6.5–7.4 mm ······ *malaysiana* n. sp.

— Antennae brownish on segments I–II, black on segments III–VII, yellow on segments VIII–XI, with tips of the terminal segment blackish. Elytron yellowish. Legs entirely black. In male, apical sternite with median lobe oblong, its surface concave. In female, apical sternite with three narrow and deep emarginations. Length 4.8–5.7 mm ······ *semifovea* n. sp.

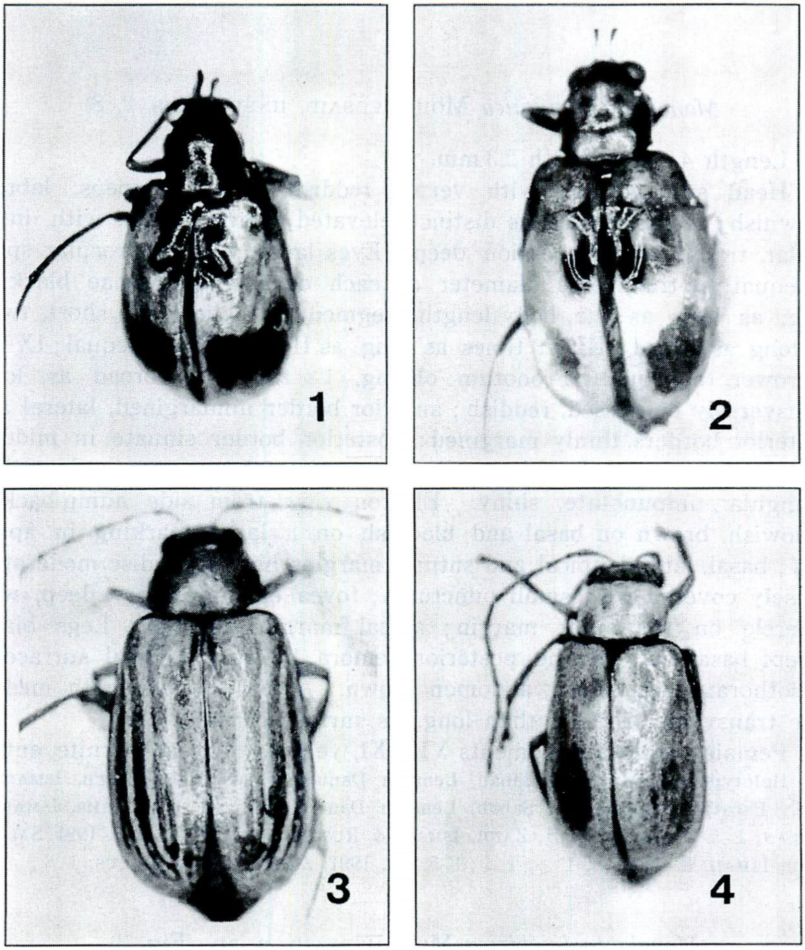
6. View from side, elytron normal, not hump-backed. Elytron with a large black marking on the apical half. Abdomen yellowish; apical sternite and pygidium reddish. Legs dark brown, with tibiae and tarsi black. In male, elytron with an elongate, deep fovea and somewhat oblique; apical sternite with median lobe oblong, its surface generally flat. Length 4.2–4.4 mm ······ *borneensis* n. sp.

— View from side, elytron hump-backed. Elytron with basal one-fourth brown, apical half yellowish, with a large silvery marking. Abdomen generally brownish. Legs black, with basal half of hind femora dark brown. In male, elytron with an elongate and deep fovea; apical sternite with median lobe transverse, its surface concave. Length 4.8–5.1 mm ······ *danumica* n. sp.

Monolepta borneensis MOHAMEDSAID, n. sp. (Figs. 1, 9, 12)

Length 4.4 mm, width 2.1 mm.

Head subquadrate, reddish, with labrum dark brown, impunctate, shiny; frontal tubercles distinct, elevated above vertex, with interocular transverse impression deep. Eyes large, with interocular space subequal to transverse diameter of each oculus. Antennae black, very long, as long as the body length; segment I, longest, club-shaped; II, short, twice as long as broad; III, 1.5 times as long as II; IV–XI, longer, subequal to each other. Pronotum oblong, 1.2 times as broad as long, reddish, transversely and deeply depressed; anterior border unmargined, lateral borders thickly margined, posterior border thinly margined and sinuate in middle; disc densely covered with small punctures. Scutellum triangular, impunctate. Elytron yellowish, reddish brown on shoulder and basal area near scutellum, black on fovea and a large marking on apical half; fovea elongate, somewhat oblique posteriorly, with a distinct tubercle on the outer margin; disc densely covered with small punctures; apical margin rounded. Legs yellowish, with tibiae and tarsi dark



Figs. 1-4. Dorsal views of *Monolepta* spp.
1, *M. borneensis* n. sp.; 2, *M. danumica* n. sp.;
3, *M. lambirica* n. sp.; 4. *M. limbangica* n. sp.

brown. Pygidium reddish. Ventral surface of thorax reddish brown; abdomen yellowish, with apical sternite brownish; median lobe of the apical sternite oblong, its surface generally flat.

Female. Elytron yellowish, with basal one-fifth and a large marking on apical half black. Apical sternite with two narrow and deep emarginations, forming two conical lobes, with a narrow process in middle, covered with long pubescence.

Holotype: ♂, Malaysia, Sabah, Lembah Danum, 3-5. xii. 1991, ZAIDI, IS, LAN & YUS. Paratypes: same data as the holotype, 1 ♀; 20. viii. 1989, SALLEH, ISMAIL & NOR, 1 ♀.

Monolepta danumica MOHAMEDSAID, n. sp. (Figs. 2, 8)

Length 4.9 mm, width 2.3 mm.

Head subquadrate, with vertex reddish brown, clypeus, labrum brownish; frontal tubercles distinct, elevated above vertex, with interocular transverse impression deep. Eyes large, with interocular space subequal to transverse diameter of each oculus. Antennae blackish, long, as long as the body length; segment I, longest; II, short, twice as long as broad; III, 1.3 times as long as II; IV-VIII, subequal; IX-XI, narrower, subequal. Pronotum oblong, 1.2 times as broad as long, transversely depressed, reddish; anterior border unmargined, lateral and posterior borders thinly margined; posterior border sinuate in middle; disc densely covered with small punctures, rather rugose. Scutellum triangular, impunctate, shiny. Elytron view from side hump-backed, yellowish, brown on basal and blackish on a large marking in apical half; basal, lateral, apical and sutural margins brownish; disc moderately densely covered with small punctures; fovea elongate, very deep, with tubercle on the outer margin; apical margin rounded. Legs black, except basal half of the posterior femora brown. Ventral surface of mesothorax dark brown, abdomen brown. Apical sternite with median lobe transverse, broader than long, its surface concave.

Female. Antennal segments VIII-XI, yellow. Apical sternite entire.

Holotype: ♂, Malaysia, Sabah, Lembah Danum, 5. iv. 1989, SALLEH, ISMAIL & NOR. Paratypes: Malaysia, Sabah, Lembah Danum, 4-7. xii. 1990, ZAIDI, ISMAIL & RUSLAN, 1 ♀; 16-19. v. 1991, ZAIDI, ISMAIL & RUSLAN, 1 ♀; 27-31. viii. 1991, SALLEH, ZAIDI, ISMAIL & RUSLAN, 1 ♂, 1 ♀; 3-5. xii. 1991, ZAIDI, IS, LAN & YUS, 1 ♀.

Monolepta lambirica MOHAMEDSAID, n. sp. (Fig. 3)

Length 5.1 mm, width 2.4 mm.

Head subquadrate, brown, impunctate, shiny; frontal tubercles distinct, elevated above vertex, with interocular transverse impression deep. Eyes small, with interocular space nearly twice as broad as transverse diameter of each oculus. Antennae extending slightly beyond middle of elytra; segment I, longest, club-shaped; II, short, twice as long as broad; III, 1.5 times as long as II; IV–VII, longer, subequal; VIII–XI, shorter, narrower, subequal. Pronotum convex, transverse, 1.6 times as broad as long, brown, sparsely covered with small punctures; anterior border unmargined, lateral and posterior borders thinly margined. Scutellum triangular, black, impunctate, shiny. Elytron yellowish, with five silvery stripes; basal, lateral, apical and sutural margins black; postscutellar area with a narrow and deep impression and a shallow fovea; disc moderately densely covered with large punctures; apical margin truncate. Legs yellowish, with tibiae and tarsi dark brown. Pygidium reddish brown. Ventral surface of mesothorax black, abdomen yellowish, with apical sternite reddish brown; median lobe of the apical sternite quadrate, as broad as long, its surface generally flat.

Female. Unknown.

Holotype: ♂, Malaysia, Sarawak, Miri, Taman Negara Bukit Lambir, 13–15. i. 1992, Salleh & Zaidi. Paratype: Malaysia, Sarawak, Lanjak, 28–29. ii. 1992, Zaidi, 1 ♂.

Monolepta limbangica Mohamedsaid, n. sp. (Figs. 4, 10, 13)

Length 4.0 mm, width 1.8 mm.

Head subquadrate, brownish; frontal tubercles distinct, moderately elevated above vertex; interocular impression deep. Eyes large, with interocular space 1.5 times as broad as transverse diameter of each oculus. Antennae long, extending slightly beyond two-thirds of the body length, brownish; segment I, longest; II, short, twice as long as broad; III, 1.9 times as long as II; IV–VIII, broader, subequal; IX–XI, narrower, subequal. Pronotum convex, transverse, 1.5 times as broad as long, yellow; anterior border unmargined, lateral and posterior borders thinly margined; disc sparsely covered with fine punctures. Scutellum triangular, impunctate, black. Elytron yellowish, with basal, lateral, apical and sutural margins black; epipleuron with upper and lower margins black; fovea elongate and moderately deep; apical margins rounded. Ventral surface of mesothorax black, abdomen yellowish. Legs entirely brownish. Apical sternite with median lobe cleft near the base, elongate-oblong, twice as long as broad, its surface longitudinally sulcate.

Female. Apical sternite broadly and deeply emarginate, covered with long pubescence.

Holotype: ♂, Malaysia, Sarawak, Limbang, Mendamit, 18-21. ii. 1991, ZAIDI. Paratypes: same data as the holotype, 5 ♂♂, 1 ♀.

Remarks. In some specimens the mesothorax dark brown, not black.

Monolepta malaysiana MOHAMEDSAID, n. sp. (Fig. 5)

Length 7.3 mm, width 3.4 mm.

Head subquadrate, brown, with labrum black; frontal tubercles distinct, elevated above vertex, with interocular transverse impression deep. Eyes large, with interocular space slightly narrower than transverse diameter of each oculus. Antennae very long, as long as the body length; segment I, longest, club-shaped; II, shortest, twice as long as broad; III, 1.5 times as long as II; IV-VIII, longer, subequal; IX-XI, shorter, narrower, subequal. Pronotum moderately depressed, transverse, 1.5 times as broad as long, brown; anterior border unmargined, lateral borders thickly margined, posterior border thinly margined, sinuate in middle; disc densely covered with small punctures. Scutellum triangular, brown, impunctate, shiny. Elytron with basal half brown, apical half yellowish; disc densely covered with small punctures; fovea elongate and moderately deep, with a tubercle on the outer margin; apical margin rounded. Legs black, except basal half of posterior femora. Ventral surface of mesothorax dark brown, abdomen brown. Apical sternite with median lobe quadrate, as broad as long, its surface generally flat.

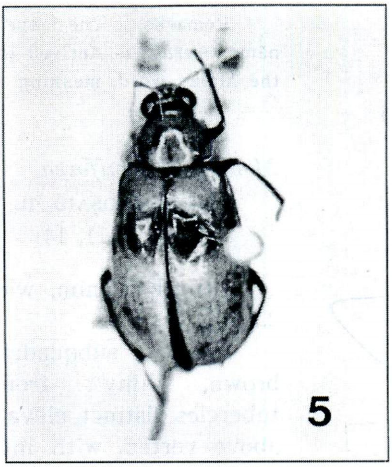
Female. Apical sternite slightly emarginate.

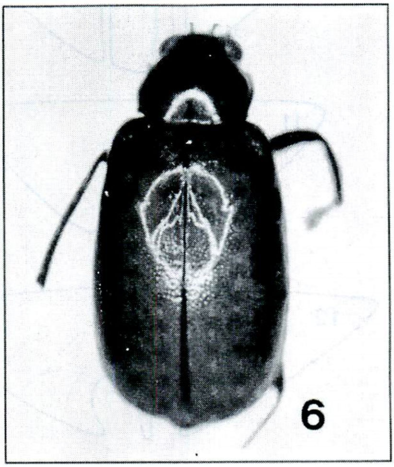
Holotype: ♂, Malaysia, Sarawak, Semengok, 19-21. xi. 1991, SALLEH, ZAIDI & ISMAIL. Paratypes: same data as the holotype, 13 ♂♂, 15 ♀♀; Johor, Mersing, H. L. Gunung Arung, 9. iv. 1988, SALLEH & ISMAIL, 2 ♀♀; Sabah, Ekspedisi Gunung Danum, 6-12. vi. 1989, ISMAIL, 2 ♀♀; Lembah Danum, 3-6. xii. 1991, ZAIDI, ISMAIL & RUSLAN, 1 ♂.

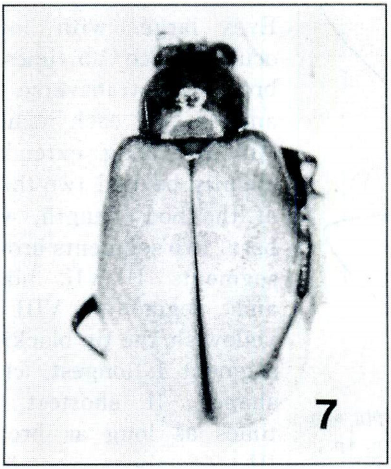
Monolepta merah MOHAMEDSAID, n. sp. (Fig. 6)

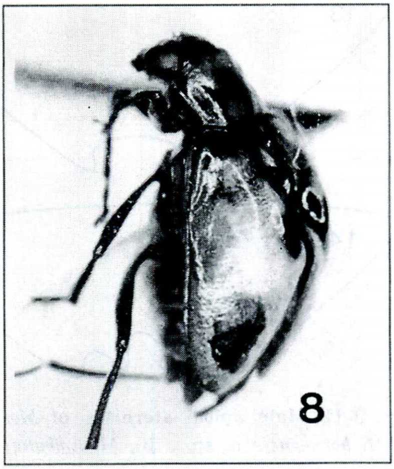
Length 4.8 mm, width 2.3 mm.

Head subquadrate, reddish, shiny; frontal tubercles distinct, elevated above vertex, with interocular transverse impression deep. Eyes large, with interocular space slightly narrower than transverse diameter of each oculus. Antennae black, very long, as long as the body length; segment I, longest, club-shaped; II, shortest, 1.5 times as long as broad; III, 1.5 times as long as II; IV-VIII, longer, subequal; IX-XI, narrower, subequal. Pronotum moderately depressed, oblong, 1.6 times as broad as long, reddish; anterior border unmargined, lateral and posterior borders thinly margined; posterior border sinuate in middle; disc densely covered with small punctures. Scutellum triangular, impunctate, shiny. Elytron entirely reddish; disc densely covered with small punctures; fovea narrowed posteriorly, moderately deep, without any distinct tubercle; apical margin rounded. Ventral surface reddish brown. Legs entirely black. Apical sternite with median lobe quadrate,

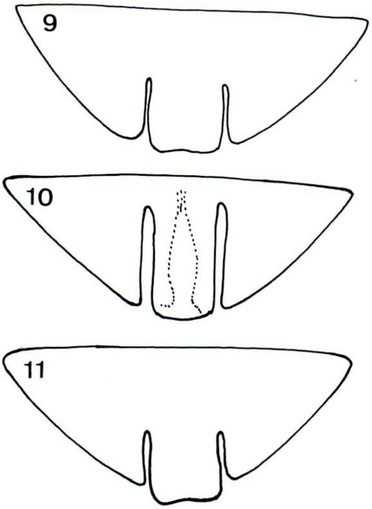


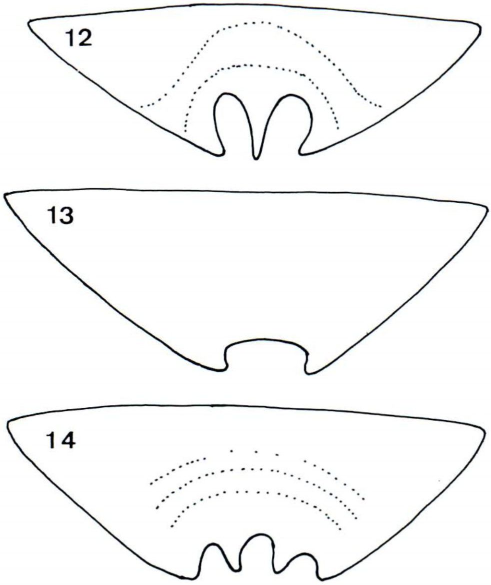






Figs. 5-7. Dorsal views of *Monolepta* spp.
5, *M. malaysiana* n. sp.; 6, *M. merah* n. sp.; 7, *M. semifovea* n. sp.
Fig. 8. Lateral view of *Monolepta danumica* n. sp.





Figs. 9–11. Male apical sternites of *Monolepta* spp. 9, *M. borneensis* n. sp.; 10, *M. limbangica* n. sp.; 11, *M. semifovea* n. sp.;

Figs. 12–14. Female apical sternites of *Monolepta* spp. 12, *M. borneensis* n. sp.; 13, *M. limbangica* n. sp.; 14, *M. semifovea* n. sp.

as broad as long, its surface concave.

Female. Unknown.

Holotype: ♂, Malaysia, Sarawak, Miri, Taman Negara Bukit Lambir, 13–15. i. 1992, Salleh & Zaidi. Paratypes: same data as the holotype, 2 ♂♂.

Remarks. The species name, *merah*, is derived from the Malay word, meaning red.

Monolepta semifovea Mohamedsaid, n. sp.

(Figs. 7, 11, 14)

Length 5.6 mm, width 2.2 mm.

Head subquadrate, brown, shiny; frontal tubercles distinct, elevated above vertex, with interocular impression deep. Eyes large, with interocular space 1.5 times as broad as transverse diameter of each oculus. Antennae long, extending slightly beyond two-thirds of the body length, with basal two segments brown, segments III–VII, black, and segments VIII–XI, yellowish, the tip blackish; segment I, longest, club-shaped; II, shortest, 1.5 times as long as broad; III, 1.8 times as long as II; IV–VII, longer, subequal; VIII–XI, slightly narrower, subequal.

Pronotum moderately depressed, transverse, 1.4 times as broad as long; anterior border unmargined, lateral and posterior borders thinly margined. Scutellum triangular, brownish, shiny. Elytron yellowish, with lateral and apical margins widely brownish; apical margin truncate; fovea small and shallow. Ventral surface brownish. Legs entirely black. Apical sternite with median lobe oblong, its surface concave.

Female. Apical sternite with three narrow and deep emarginations, covered with long pubescence.

Holotype: ♂, Malaysia, Sabah, Lembah Danum, 3-5. xii. 1991, ZAIDI, IS, LAN & YUS. Paratypes: same locality as the holotype, 5. iv. 1989, SALLEH, ISMAIL & NOR, 3 ♀♀; 20. viii. 1989, SALLEH, ISMAIL & NOR, 1♂; 4-7. xii. 1990, ZAIDI, ISMAIL & RUSLAN, 1♂, 3♀♀; 3-5. xii. 1991, ZAIDI, IS, LAN & YUS, 6 ♂♂, 17 ♀♀; 27-31. viii. 1991, SALLEH, ZAIDI, MAIL & LAN, 1♂, 6♀♀; Ekspedisi Gunung Danum, 6-12. vi. 1989, ISMAIL, 2♀♀.

Acknowledgments

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Hydrocoptus bivittis MOTSCHULSKY キボシチビコツブゲンゴロウすでに35年以上も前に奈良県において採集されていた

大 倉 正 文

昨年（1992年）暮れに *Copelatus parallelus* ZIMMERMANN コセスジゲンゴロウの写真を写したいので貸してほしいと，拙宅を訪れられた環境科学㈱の森正人・北山昭両氏が他のゲンゴロウ類の標本も見せてほしいとのことで，私の貧弱なコレクションをお見せしたところ，その中から *Hydrocoptus bivittis* MOTSCHULSKY キボシチビコツブゲンゴロウを見つけだされた.

この標本は当時，手許に所有する僅かな文献で種名を調べたが同定することができず，そのまま *Canthydrus politus* (SHARP) ムツボシツヤコツブゲンゴロウの隣りに並べておいて，ついそのまま忘れてしまっていたもので，林匡夫博士が奈良県橿原神宮近くの池から採集されて，戴いたものである．改めて同博士にお尋ねしたところ，何分古い記憶であるが，関西自然科学研究会の自然観察会当日，橿原神宮近くの森林公園内の小さな池から採集したものだと思うとのことであった.

1 ex., nr. Kashihara Shrine, Nara Pref., 19. V. 1955, M. HAYASHI leg.

永い間，放りっぱなしにしておいたことをお詫びするとともに，貴重な標本をご恵与下さった同博士に深くお礼申しあげる次第である.

なお，保育社の原色日本甲虫図鑑（II）の佐藤正孝博士の解説によると，本種は東洋区系の種類らしく，分布は台湾，中国南部，ベトナム，タイ，ビルマ，インド，スリランカとなっていて，日本では愛知県知多半島の池で記録されているにすぎないとして，その個体が図示されているが，北山氏の話しでは最近他でも採集されているとのことである.

何れにしても，珍しい種類であるので，非常に古い記録であるが，ここに報告するとともに，私の標本箱の中から本種を見いだして下さった森・北山両氏に厚くお礼申しあげる.

A New Species and One New Subspecies of the Genus *Ovalisia* KERREMANS, 1900, from the Philippines (Coleoptera, Buprestidae)

By KÔYÔ AKIYAMA[1] and SADAHIRO OHMOMO[2]

Abstract One new species and one new subspecies of the genus *Ovalisia* from the Philippines are described under the names of *Ovalisia sakaii* and *O. semperi kurosawai*.

In the genus *Ovalisia*, only one species, *semperi* (E. SAUNDERS, 1874) has hitherto been known from the Philippines. About four years ago, through the courtesy of our entomological senior, Dr. YOSHIHIKO KUROSAWA and Mr. KAORU SAKAI, we were able to examine specimens of the genus *Ovalisia* collected in Luzon and Mindanao both from the Philippines. This study reveals an undescribed species and one subspecies that are described in this paper. The holotypes will be deposited in the National Science Museum (Nat. Hist.), Tokyo.

We wish to express our sincere gratitude to Prof. Dr. GAYLE H. NELSON, head of the Department of Anatomy, College of Osteopathic Medicine of the Pacific, Pomona, California, for his kindness in reading the original manuscript and invaluable suggestions, to Dr. YOSHIHIKO KUROSAWA, Tokyo and Mr. KAORU SAKAI, Tokyo, for their kind offer of the materials.

Ovalisia sakaii AKIYAMA et OHMOMO, sp. nov. (Figs. 3, 5, 7, 9)

Female. Oblong ovate and strongly shining; dorsal surface golden green with orange tinge, especially center of head and lateral margins of pronotum and elytra; each elytron ornamented with four irregular indigo-blue spots as follows: a spot at middle of basal third, a spot behind middle near lateral margin, spots at apical third near suture and apical fourth at middle. Ventral surface, antennae and legs metallic golden green with blue tinge.

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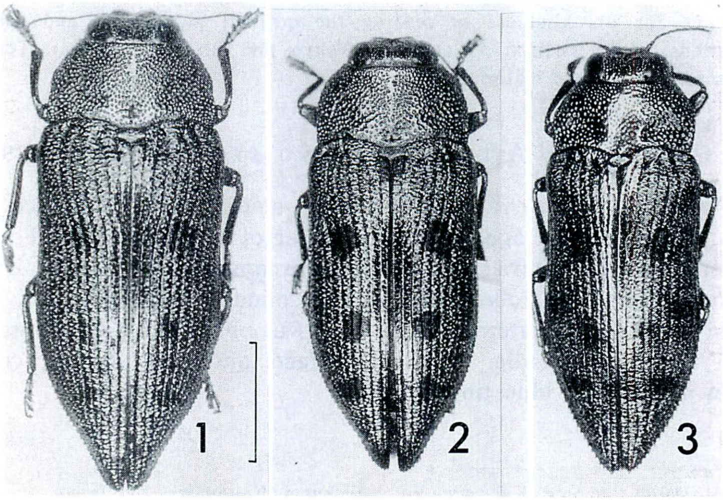
[Ent. Rev. Japan, Vol. XLVIII, No. 1, pp. 11-14, June, 1993]

Head with vertex flat, coarsely punctate; frons depressed medially, broadly and deeply depressed around antennal cavities, with two strong oblique ridges running from inside of each eye toward midline; surface coarsely, confluently punctate, sparsely clothed with short inconspicuous semirecumbent white setae; eyes ovate, subparallel to each other in frontal view; clypeus strongly foveolate along clypeal suture which is straight between antennal cavities and with anterior margin deeply arcuately emarginate; antennae reaching apical fourth of pronotum, coarsely clothed with long erect white setae; first antennomere largest, cylindrical, second shortest, stout, third cylindrical, fourth to tenth segments serrate and lobe rounded, eleventh oblong, ratio of the length of each antennomere:— 11 : 5 : 7 : 10 : 9 : 8 : 8 : 8 : 8 : 8 : 7.5.

Pronotum transverse, about 1.9 times as wide as long, widest at middle; lateral margins subparallel on basal half, then moderately arcuate and converging anteriorly; anterior margin arcuately emarginate; posterior margin strongly bisinuate, with median lobe broadly produced and subtruncate before scutellum; disc flat in the middle, shallowly depressed on each side in basal half with median carina from apex to base; surface with impunctate area at middle, becoming strongly rugose and confluent laterally. Scutellum transverse, subpentagonal, about 1.5 times as wide as long and with surface shallowly depressed in the middle.

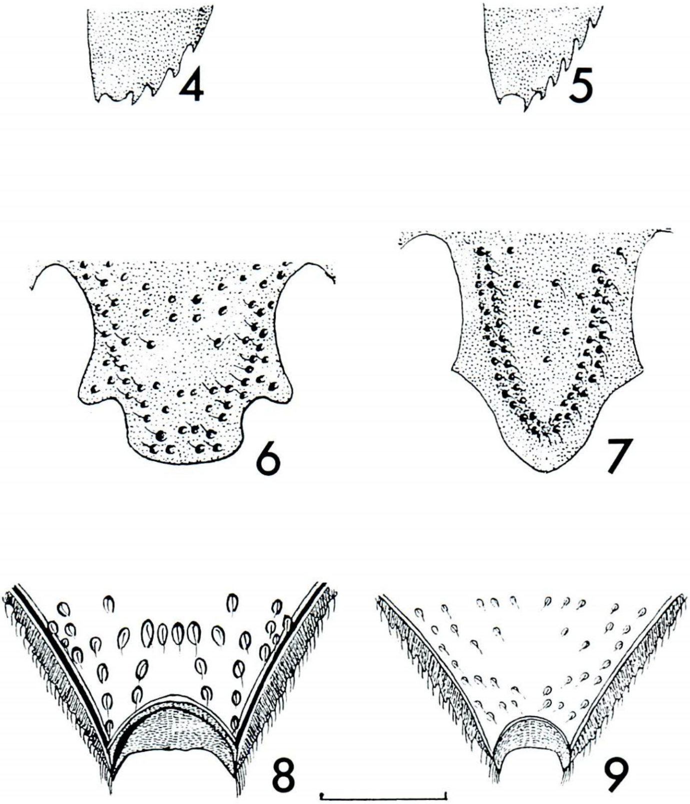


Figs. 1–3. Dorsal aspects of *Ovalisia* spp.

1, *O. semperi semperi* (SAUNDERS), ♀ ; 2, *O. semperi kurosawai* AKIYAMA et OHMOMO, subsp. nov., ♀ ; 3, *O. sakaii* AKIYAMA et OHMOMO, sp. nov., ♀. (Scale bar : 3 mm.)

Elytra about 2.4 times as long as wide, about 4.3 times as long as pronotum and widest just behind humeri and apical two-fifths; lateral margins obliquely expanding at humeri, feebly sinuous to middle, where they are broadly arcuately rounded, then obliquely narrowed to apices, with apical three-fifths uniformly serrate; apices arcuately emarginate, sutural and lateral angles acute (Fig. 5); basal margin strongly bisinuate; disc strongly convex in the middle, concave on each side near basal margins; surface confluently, rugosely punctate except near elytral suture, intervals densely, confluently punctate except for impunctate black spots.

Prosternum flat, coarsely foveolate punctate with anterior margin



Figs. 4-9. *O. semperi semperi* (Saunders) (4, 6 and 8) and *O. sakaii* Akiyama et Ohmomo, sp. nov. (5, 7 and 9).

4-5, Apices of right elytron; 6-7, prosternal processes; 8-9, last visible abdominal sternites. (Scale bar: 1 mm.)

rugosely punctate and feebly emarginate; prosternal process with foveolate punctures arranged in U-shaped configuration (Fig. 7); lateral margin arcuately emarginate in seven-twelfths, then strongly sinuate toward bluntly pointed apex (Fig. 7). Abdominal surface foveolate punctate, scattered with short semirecumbent silver whitish setae; apex of last visible abdominal sternite broadly arcuately emarginate (Fig. 9).

Legs short and robust, sparsely clothed with short semierect golden whitish setae; femora fusiform in dorsal view; protibiae feebly arcuate, mesotibiae and metatibiae almost straight and clothed with semierect golden whitish coarse setae on inner and outer margins; tarsi stout with ventral pulvillus.

Male. Unknown.

Length: 10.6-12.8 mm; width: 3.9-5.0 mm.

Holotype: ♀, Banaue, North Luzon, v. 1988, native collector leg. Paratypes: 3 ♀♀, same data as the holotype.

Notes. This new species is closely allied to *Ovalisia semperi* (SAUNDERS, 1874) known from the same island, but can be easily distinguished from the latter by the body coloration not reddish orange but golden green with orange tinge, the apices of elytra are acute, not arcuate (Figs. 4, 5), the apex of prosternal process is obtuse, not rotundate (Figs. 6, 7), the different punctate pattern of prosternal process (Figs. 6, 7) and the shape of the last visible abdominal sternite (Figs. 8, 9).

Ovalisia semperi kurosawai AKIYAMA et OHMOMO, subsp. nov. (Fig. 2)

This new subspecies is different from the nominotypical subspecies in the following characteristics: 1) dorsal surface green with orange tinge, while in *semperi semperi*, it is reddish orange; 2) prosternal process strongly foveolate punctate with feeble shine, while in *semperi semperi*, it is foveolate punctate with strong shine.

Length: 10.6-10.8 mm; width: 4.2-4.3 mm.

Holotype ♀, Bislig, East Mindanao, 5. vii. 1977, Y. KUROSAWA leg. Paratype: 1 ♀, Surigao del Norte, Mindanao, v. 1984, native collector leg.

Literature cited

SAUNDERS, E., 1874. Notes on the Buprestidae collected by Professor SEMPER in the Philippines Islands; with description of the new species. Trans. Ent. Soc. London, 1874: 297-322.

Taiwanese Elateridae Collected by Mr. M. YAGI in 1991, with the Descriptions on Some New Taxa (Coleoptera)

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In the summer of 1991, I received a lot of interesting elaterids collected from Taiwan in May of the same year by Mr. MASAMICHI YAGI in Ibaraki City. This report is the result of my identification of these specimens consisting of 38 species, of which three are new to science, and includes a species recorded newly from Taiwan. And more, a few examples collected in May of 1985 and 1989 are also included, of which one species is described newly here as the latest careful examination.

Before going further I wish to express my hearty gratitude to Mr. YAGI for his kind offering me an opportunity to study. The holotype specimens of the new taxa are deposited in my private collection, and some paratypes are in several students as stated in the description.

Besides, the Chinese characters of localities are as follows: Angchuikhoe: 紅水渓; Chipen Spa: 知本温泉; Gokang Shan: 五公山; Kiantoa Shan: 京大山; Manzhou: 満洲; Pilu Simmu: 碧緑; Saichitau: 獅子頭; Shoukah or Suifeng: 翠峰; Tengszi: 藤枝.

Subfamily **Agrypninae** CANDÈZE

Agrypnus (*Sagojyo*) *taiwanus* (MIWA, 1927) (Fig. 11)

Lacon taiwanus MIWA, 1927, Ins. Mats., 2(1): 13 & 14, Pl. 1, fig. 2 (♀) (Baibara, Koshun, Horisha & Arisan in Formosa).

1♀, Kiantoa Shan near Liukuei, Kaohsiung Hsien, May 6, 1991; 1♀, Gokang Shan near Liukuei, ditto, May 7, 1991.

Agrypnus (*Sagojyo*) *kawamurae* (MIWA, 1929) (Fig. 10)

Lacon kawamurae MIWA, 1929, Trans. nat. Hist. Soc. Formosa, 19(102): 230 & 231 (Horisha in Formosa).

1♂, Chipen Spa, Taitung Hsien, May 2, 1991.

〔Ent. Rev. Japan, Vol. XLVIII, No. 1, pp. 15-34, pls. 1-5, June, 1993〕

Subfamily **Pyrophorinae** CANDÈZE
Tribe Adelocerini DU BUYSSON

Adelocera (*Brachylacon*) *shirozui shirozui* (ÔHIRA, 1967) (Figs. 12 & 38)

Brachylacon (*Aganolacon*) *shirozui* ÔHIRA, 1967, Kontyû, 35(1): 55, fig. 1-A (Nanshanchi in C. Formosa).

1♂, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991.

Lacon (*Alaotypus*) *kikuchii* (MIWA, 1929) (Figs. 13 & 37)

Adelocera kikuchii MIWA, 1929, Trans. nat. Hist. Soc. Formosa, 19(102): 226 & 227 (Horisha in Formosa).

1♀, Saichitau, Nantou Hsien, May 15, 1989.

Tribe Chalcolepidiini LACORDAIRE

Cryptalaus larvatus larvatus (CANDÈZE, 1874)

Alaus larvatus CANDÈZE, 1874, Mém. Soc. roy. Sci. Liège, (2)4: (121) & 141 (Chine: Shanghai).

1♂, Saichitau, Nantou Hsien, May 15, 1989.

Subfamily **Pityobiinae** HYSLOP
Tribe Pectocerini GURJEVA

Pectocera (*Pectocera*) *yaeyamana* W. SUZUKI, 1976

Pectocera (*Pectocera*) *yaeyamana* W. SUZUKI, 1976, Kontyû, 44(3): 263-266, figs. 1-4 (Is. Iriomote-jima & Is. Ishigaki-jima).

1♂, Tengszi, Kaohsiung Hsien, May 12, 1989.

This species is firstly recorded from Taiwan. Among the Taiwanese *Pectocera*-species it is the largest and has a splendid appearance.

Subfamily **Denticollinae** REITTER
Tribe Hemicrepidiini CHAMPION

Subathous formosensis KISHII, sp. nov. (Figs. 1, 14 & 39)

Hemicrepidius (*Alcimathous*) *tattakensis*: KISHII, 1990, Ent. Rev. Japan, 45(1): 12, figs. 6 & 22 (Pilu Simmu in Taiwan), nec *Paradima tattakensis* MIWA, 1928, Ins. Mats., 3(1): 38, Pl. 1, fig. 1 (Tattaka in Formosa).

In the previous paper, I reported a male Hemicrepidiine-species as MIWA's *tattakensis*, which was described under the new genus *Paradima*, but he revised to the genus *Athous* in 1931 and soon after combined with the subgenus *Alcimathous* of *Athous* in his famous monograph (1934 : 223). Recently, through the courtesy of Mr. TAICHI SHIBATA in Osaka, I had an opportunity to examine several congeneric examples for the study and determination. According to the literature by FLEUTIAUX in 1918, these elaterids belong undoubtedly under the genus *Subathous* FLEUTIAUX, 1918 (Ann. Soc. ent. France, 87 : 203. Type-species : *Subathous tonkinensis* FLEUTIAUX, 1918, from Tonkin, monobasic). The Taiwanese specimens are allied to *tonkinensis* in some points, however, it is heterogeneous beyond doubt, and more they consist of two species as the result of careful investigation. Judging from the original description by MIWA, YAGI's specimen reported in 1990 is a new taxon as shown by following description. And, I think finally, SHIBATA's specimens are true *tattakensis* in many structures as the result of my study.

Male, 12.95×3.10 mm. Elongate, rather slender, plainly flattened at dorsal surface as well as at ventral surface slightly, parallel-sided, widest behind elytral humeri, and generally subopaque wholly. Dusky brown entirely, but more or less infuscate at most parts of antennal joints, head, pronotum and of ventral segments, excepting of apical part of 11th antennal joint, ventral parts of mouth, anterior and posterior angles of pronotum briefly, hind margins of abdominal segments and legs more or less reddish brown. Pubescence long, tender, rather dense, entirely recumbent at pronotum, semierect at elytra and pale yellowish to somewhat white with lustre.

Head rather broad, feebly declivous antero-inferiorly, with a wide subtriangular depression at frons ; relative width of each eye and extent across eyes at upper views as 17 : 67 (ca. 4 times) ; frons triangularly expanded ahead, with anterior border glabrous narrowly ; frontal edge ill-carinate, but well-defined, not vanished at middle, clearly carinate and a little upheaved upon antennal sulci ; frontal groove perfectly absent at middle and visible subtriangularly before antennal sulci only. Mouth parts prognathous forwards, large and wide ; labrum elongate transversely, subcrescent-formed with large coarse punctures. Vertical punctures single, large, dense and uneven in size, entirely smooth at narrow space among punctures ; average breadth among punctures remarkably narrower than puncture diameter.

Antennae elongate, slender, exceeding apices of pronotal hind angles by two apical joints or more ; relative lengths and widths from basal joint to 5th as 27/10.5, 11.5/9, 22/12, 25.5/14 and 27/14 respectively (length/width) (fig. 1-a) ; basal joint cylindrical and a little swollen apically, 2nd subglobose, 3rd triangular, 4th to 10th subhanging-bell-shaped and progressively becoming narrower terminally, and 11th parallel-sided and longer than 10th with a pair of feeble emarginations at sides behind apex (fig. 1-b).

Pronotum elongate, slightly and roundly expanded laterally at middle, then gently convergent to anterior angles as well as to bases of posterior angles, simply and roundly convex up without any median line nor furrow; relative median length and width as 100 : 85; hind angles (fig. 1-c) subparallel mutually at outer edges, plainly short, rather obtuse at apices, having no carination, with a distinct basal furrow near each angle and triangularly notched. Discal punctures circular, simple, denser and a little smaller than head ones at middle, but progressively becoming denser and smaller to lateral borders; interpunctate surface glabrous entirely and average extent across punctures narrower than puncture diameter.

Scutellum (fig. 1-d) subshield-formed, rather flattened, rather subperpendicularly declivous antero-inferiorly, and weakly narrowed near middle; hind end rounded; anterior border slightly elevated and a little roundly expanded ahead; relative median length and maximum width as 36 : 27.

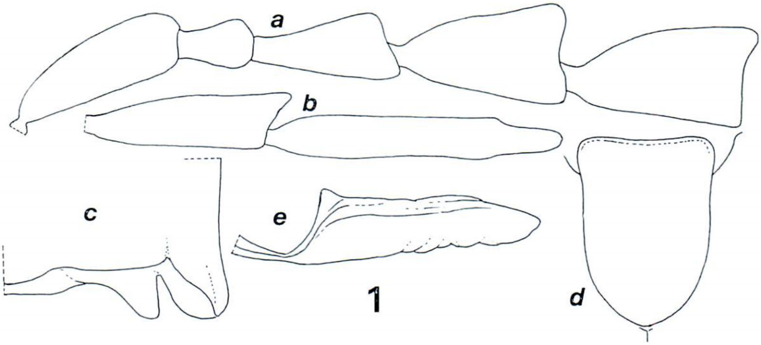


Fig. 1. *Subathous formosensis* Kishii, sp. nov., ♂.
a, Antennal joints, 1st to 5th; b, ditto, 10th & 11th; c, hind angle of pronotum; d, scutellum; e, prosternal process in profile.

Elytra clearly wider than pronotum, obviously elongate and parallel-sided from humeri to beyond middle, then gently roundly tapering posteriorly; elytral ends rounded and sutural ends feebly mucronate; striae narrowly furrowed discontinually, with small elliptic and rather obscure punctures; strial interstices weakly elevated with minute and coarse punctures along both sides of striation, namely widely smooth medio-longitudinally, but feebly sparsely and unevenly creased transversely in high magnification, especially rather clear at basal parts.

Prosternum oblong, a little widened anteriorly, moderately elevated medio-longitudinally, with punctures sparse and a little smaller than pronotal ones; anterior lobe flattened, smooth and slightly elevated transversely at base, with rough large and uneven punctures along fore edge, which is transverse and ill-limited. Prosterno-pleural sutures straight and single, but broadly carinate at base of each pleural edge near procoxa only; anterior ends closed. Prosternal process in profile (fig. 1-e) roundly bent inwards behind procoxae, then straightly protruding back; hind apex triangularly and obtusely pointed. Propleural punctures clearly denser and finer than prosternal ones. Metasternal punctures exceedingly sparser and smaller than prosternal ones. Legs slender; 1st tarsal joint swollen apically and expanded alike lamella at apico-posterior end, 2nd also expanded and more distinct and larger than at 1st, 3rd clearly lamellate with elongate lobe, and 4th simple and subclavate. Aedeagus as figured (fig. 39). Female unknown.

Holotype, ♂, Pilu Simmu, Hualien Hsien, May 22, 1985, M. YAGI leg.

According to the literatures, this new *Subathous*-species is distantly related to *S. tattakensis* (MIWA, 1928), but it may be distinguishable from the latter by the following structures: pronotum clearly expanded medio-laterally, not parallel-sided; frontal triangular depression at frons a little weakly concave; scutellum flattened, not medio-longitudinally elevated at anterior part; prosternal and propleural punctures not so large, dense and single, not subumbilical; prosternal process not so thick and not elongately projecting back at apex.

Subfamily **Elaterinae** LEACH

Tribe Megapenthini GURJEVA

Megapenthes suturalis (MATSUMURA, 1911) (Fig. 16)

Ludius suturalis MATSUMURA, 1911, Mem. Soc. ent. Belg., 18:145 (Formosa).

2♂♂, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991.

Megapenthes tattakensis (ÔHIRA, 1966) (Fig. 15)

Melanoxanthus tattakensis ÔHIRA, 1966, Kontyû, 34(3):266, figs. 26 & 27 (Sungkang in Formosa).

1♀, Suifeng, Nantou Hsien, May 16, 1989.

Procraerus (*Procraerus*) *sonami* (MIWA, 1929) (Fig. 17)

Megapenthes sonami MIWA, 1929, Trans. nat. Hist. Soc. Formosa, 19(105): 494-495 (Shinchiku in Formosa).

1♀, Gokang Shan near Liukuei, Kaohsiung Hsien, May 7, 1991.

Tribe Agriotini CHAMPION

Ectinus sonanis (MIWA, 1928)

Agriotes sonanis MIWA, 1928, Ins. Mats., 3(1):45, Pl. 1, fig. 10 (Musha in Formosa).

1♂, 1♀, Suifeng, Nantou Hsien, May 16, 1989.

Ectinus nokozanus (MIWA, 1928)

Agriotes nokozanus MIWA, 1928, Ins. Mats., 3(1):45 & 46, Pl. 1, fig. 11 (Mt. Nôkô in Formosa).

1♀, Tengszi, Kaohsiung Hsien, May 12, 1989.

Agriotes pallidiangulus MIWA, 1928

Agriotes pallidiangulus MIWA, 1928, Ins. Mats., 3(1):46, Pl. 1, fig. 13 (Horisha, Shinchiku, Taihoku & Mt. Niitaka in Formosa).

Agriotes formosanus MIWA, 1928, ibid.: 46 & 47, Pl. 1, fig. 14 (Horisha in Formosa).

Agriotes tonkinensis: MIWA, 1930, & auct. from Taiwan, nec *Silesis tonkinensis* FLEUTIAUX, 1894 (Tonkin in Vietnam).

1♀, Kiantoa Shan near Liukuei, Kaohsiung Hsien, May 6, 1991.

Hitherto, this common *Agriotes* found abundantly from many localities in Taiwan had been considered conspecific to the Indochinese *Agriotes tonkinensis* (FLEUTIAUX, 1894) since MIWA (1930, by FLEUTIAUX's determination). As the result of my study according to the comparative study of both the specimens from Vietnam and Taiwan, however, the latter differs from the former in having some diagnoses as follows. The pronotal surface among punctures is more or less shagreened, elytral granular punctures among punctate-striae are clearly denser and rather larger, shape of apical hook of each paramere and basal piece of the aedeagus are plainly smaller, etc. (fig. 40).

The Vietnamese specimens were sent to me through the courtesy of Dr. GIUSEPPE PLATIA in Italy, to whom I wished to express my cordial thanks for his kind offering the material. It was labeled as *Agriotes nodieri* FL. in his own handwriting. But, *A. nodieri* (*Agonischius nodieri* FLEUTIAUX, 1918) is consequently a synonym of *A. tonkinensis* (*Silesis tonkinensis* FLEUTIAUX, 1894), as the result of the revisal treatment by FLEUTIAUX himself in 1939 (Ann. Soc. ent. France, 108: 129).

The Taiwanese material closely resembles *Agriotes tonkinensis* in many external diagnoses at a glance, however they are, I believe, heterogeneous mutually.

Tribe Elaterini LEACH

Neotrichophorus rubuginosus ÔHIRA, 1966 (Fig. 18)

Neotrichophorus rubuginosus ÔHIRA, 1966, Kontyû, 34(3):272, figs. 39 & 40 (Nanshanchi & Yangmingshan in Formosa).

1♀, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991, at light.

Chiagosnius obscuripes (GYLLENHAL, 1817) (Figs. 2, 22 & 43)

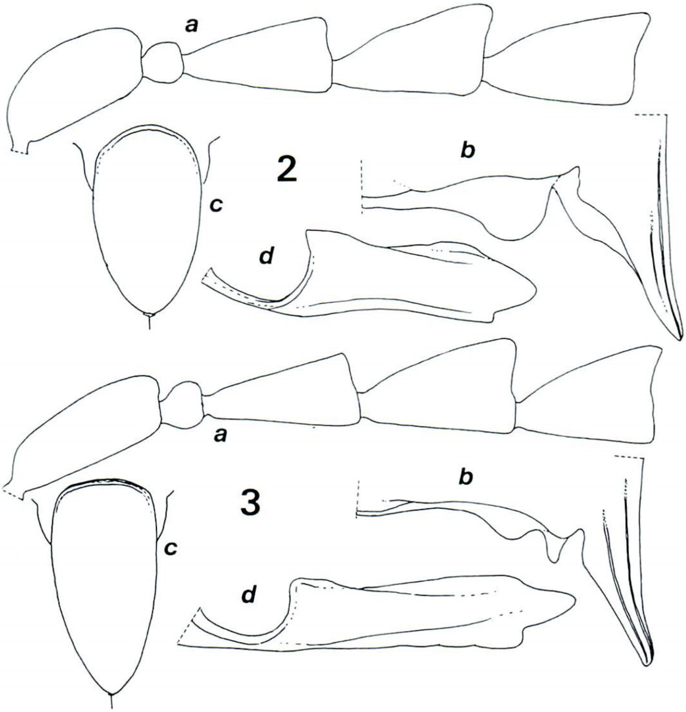
Elater obscuripes GYLLENHAL, 1817, in Append. SCHÖNHERR, Syn. Ins., 3:131 (Caucasus).

Ludius caschmirensis KOLLAR et REDTENBACHER, 1844, in HÜGEL, Reise d. Kaschmir, 4 : 507 (Kaschmir).

Ludioschema Emerichi REITTER, 1891, Wien. ent. Zeit., 1891 : 238.

1♂, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991.

On this widespread distributor being described based on the Caucasian example, many varieties and local aberrant forms reported by several entomologists. The first report from Taiwan of this species had done by BATES in 1866 as *Agonischius*-species (revised by CANDÈZE, 1863, based on the Asian specimens), thereafter in 1928, MIWA recorded and published seven varieties from Taiwan : *caschmirensis* KOLLER et REDTENBACHER, 1844, *ruficephalus* n., *sanguinicollis* n., *candezellus* n., *brunneus* n., *marginicollis* n. and *taikozana* [!] n. Though, according to my comparative investigation, some of these varieties are doubtlessly good species, and some undescribed species are also found from Taiwan as shown below.



Figs. 2-3. 2, *Chiagosnius obscuripes* (GYLLENHAL, 1817), ♂ ; 3, *Chiagosnius sanguinicollis* (MIWA, 1928), ♂.

a, Antennal joints, 1st to 5th ; b, hind angle of pronotum ; c, scutellum ; d, prosternal process in profile.

Moreover, as the nearest Taiwanese specimens to the true *obscuripes*, I think that is restricted to the elaterids having the diagnoses as follow as:

Male, 12–16 mm., female, 14–20 mm. Aeneous black with some brassy tint all over, sometimes pronotum dusky brownish, usually legs reddish brown, and distinctly shining by metallic lustre. Pubescence long, recumbent, a little curved and yellowish white. Antennae (fig. 2-a, basal 5 joints in male) exceeding apices of pronotal hind angles by one apical joint (male), and subequal or less (female). Hind angle of pronotum as figured (fig. 2-b). Pronotal punctures large, dense and average extent among punctures subequal to puncture diameter or a little narrower. Scutellum as figured (fig. 2-c). Prosternal process in profile (fig. 2-d), thick with hind apex triangularly projecting having subapical projection clearly small and angulated. Male genitalia (fig. 43), apex of each paramere narrow and rounded.

Chiagosnius sanguinicollis (MIWA, 1928), stat. et comb. nov.

(Figs. 3, 23 & 44)

Agonischius obscuripes GYLLENHAL, 1817, var. 3. *sanguinicollis* MIWA, 1928, Ins. Mats., 3 (1): 48 (Ishigakijima, Urai, Horisha, Kôshun & Kuraru), part.

Chiagosnius obscuripes: KISHII, 1989, Trans. Essa ent. Soc., Niigata, (67): 38, figs. 21 & 29-b (Too-nah near Mao-ling in Taiwan), part.

1♂, Chipen Spa, Taitung Hsien, May 2, 1991; 1♂, Shoukah, Taitung Hsien, May 3, 1991; 1♂, Manzhou, Pingtung Hsien, May 3, 1991; 1♀, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991.

MIWA (1928) published this elaterid as one of the varieties of *obscuripes* from Formosa (Urai, Horisha, Kôshun & Kuraru) and Is. Ishigakijima with a brief description. I think at least that the Taiwanese population applicable to MIWA's account must be sure having the diagnoses as follow as, and in many main structures this elaterid is a distinct species without doubt.

Male, 11–13.5 mm., female, 14–16 mm. Aeneous black with somewhat metallic bluish green lustre and remarkably shining all over. Black entirely (var. *caschmirensis* MIWA, 1928, nec KOLLAR, 1844), frequently pronotum reddish, and rarely elytra also reddish (var. *brunneus* MIWA, 1928). Pubescence similar to *obscuripes*. Antennae subequal to combined length of head and pronotum together (male, fig. 3-a, basal 5 joints), and shorter (female). Hind angle of pronotum as figured (fig. 3-b). Pronotal punctures clearly smaller and sparser, and average extent among punctures two or three times as wide as puncture diameter. Scutellum as figured (fig. 3-c). Prosternal process in profile (fig. 3-d), not so thick, elongate, with hind apex rather acutely protruding and subapical projection rounded. Male genitalia as figured (fig. 44), apex of each paramere obviously broad and transversely truncated.

Chiagosnius taikozanus (MIWA, 1928), stat. et comb. nov. (Figs. 4, 19 & 46)

Agonischius obscuripes GYLLENHAL, 1817, var. 7. *taikozana* [!] MIWA, 1928, Ins. Mats., 3 (1) : 49 (Mt. Taikô in Formosa).

Agonischius obscuripes GYLLENHAL, var. *taikozana* [!] : MIWA, 1930, Wien. ent. Zeit., 47 (2) : 94 (Sokutsu & Kosempo in Formosa).

Agonischius obscuripes GYLLENHAL, var. *taikozanus* : MIWA, 1934, Rep. Dept. Agr. Govt res. Inst. Formosa, 65 : 236 (Mt. Taikô, Sôkutsu & Kôsempo in Formosa).

2♂♂, Angchuikhoe near Liukuei, Kaohsiung Hsien, May 4, 1991.

According to the literatures (MIWA, 1928 & 1934), although MIWA's comment are too scant, the examples brought now by Mr. YAGI from Angchuikhoe in South Taiwan are undoubtedly agreed at all to the structures of *taikozanus*. As the result of my examination of external characteristics on this material, however, it is heterogeneous perceptibly as compared with *obscuripes* and its resemblers, and it is a good species beyond doubt.

The important diagnoses of this species are shown as follow as.

Male, 8.15×2.10–9.55×2.60 mm. Elongate, narrow, parallel-sided, not so slender, subcylindrical and entirely opaque, without any metallic lustre. Aeneous black with head and mouth parts reddish, pronotum and scutellum rather infuscate reddish, basal and 2nd joints of antennae dusky brown, ventral surface of thorax brownish marginally, abdominal segments entirely reddish to yellow, and with legs entirely pale reddish yellow. Pubescence not so long, dense, semierect, rather thick, and yellowish with some tint. Head punctures distinctly large and dense, plainly uneven in size, and reticulated partly each other. Frons perpendicularly declined antero-inferiorly. Frontal edge entirely absent medianly. Antennae thick, exceeding apices of pronotal hind angles by two apical joints or less; relative lengths and widths from basal joint to 5th as 22/10, 4.5/6.5, 18.5/10, 18/11 and 18/11 respectively (length/width) (fig. 4-a); 2nd joint globular and wider than long, and 3rd to 10th serrated. Pronotum trapezoid, widest at apices of hind angles, then straightly narrowing ahead, simply convex above, with a shallow medio-longitudinal depression; hind angles (fig. 4-b) divergent postero-laterally, rather elongate, subobtusely pointed at apices, having no carination entirely; basal furrows briefly notched. Discal punctures similar to head, but feebly sparser. Scutellum (fig. 4-c) elongate, tongue-shaped, declining, and rather flattened medianly. Elytral striae fine, discontinuously grooved with small, ellipse, deep and discontinuous punctures; strial interstices rather flattened with minute and coarse punctures, distinctly and rugosely creased transversely at basal part. Prosternal and propleural punctures large, but plainly sparser and a little smaller than pronotal ones, with interpunctate space perfectly smooth. Prosternal process in profile as figured (fig. 4-e). Genitalia as figured (fig. 46). Female unknown.

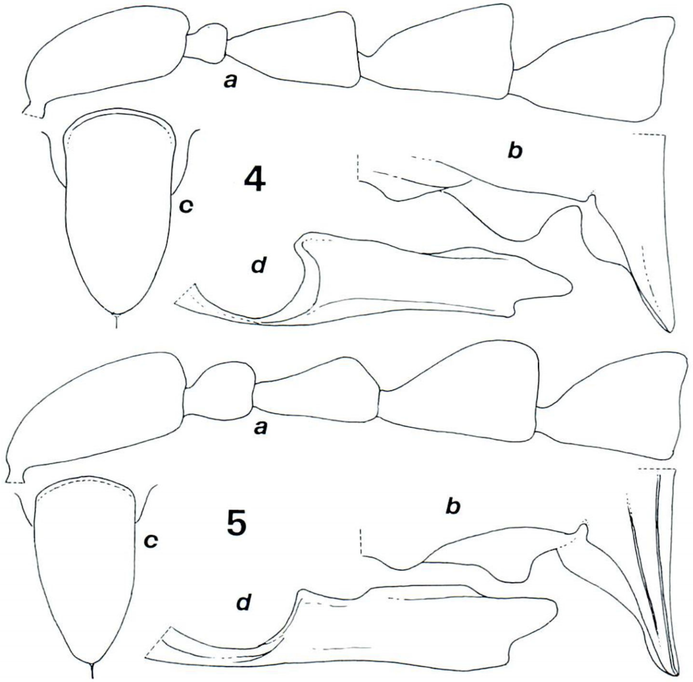
Among the Taiwanese *Chiagosnius*-species, this species is remarkably unique in the small body and non-carinate hind angles of pronotum.

Chiagosnius apayao KISHII, sp. nov. (Figs. 5, 20 & 45)

In the coloration and general appearances this new species somewhat resembles *C. obscuripes*, but may be easily differentiated by the following diagnoses.

Male, 9.65×2.75–11.10×2.85 mm., female, 10.30×2.90–12.85×3.40 mm. Usually smaller than *obscuripes*, subopaque, blackish brown with mouth parts partly, frons, antennae, anterior border of pronotum broadly, hind angles of pronotum, lateral margins of elytra, ventral surface and legs more or less reddish brown to yellow, having perceptible brassy lustre all over and never cyanic nor bluish-green tint. Pubescence straightened, thick, semierect, dense and yellowish white with some tint. Head punctures clearly dense, large and single, but plainly uneven in size and form. Antennae shorter than combined length of head and prothorax together, and hardly attaining to bases of hind angles in both sexes; relative lengths and widths from basal joint to 5th as 22/10, 7.5/7, 14.5/8.5, 18/11 and 16/10 respectively (length/width) (fig. 5-a, male); basal joint robust, cylindrical and a little expanded apically, 2nd globular, 3rd elongate and clavate, and 4th to 10th serrated. Pronotum parallel-sided medianly, roundly convergent at anterior angles, remarkably divergent at hind angles postero-laterally; simply and roundly convex above, with a shallow feeble and medio-longitudinal furrow at posterior slope only; hind angles (fig. 5-b) elongate, rather bluntly pointed at apices, with distinct bicarination, which is nearly equal in length mutually; basal furrows near hind angles large and triangularly notched. Discal punctures allied to head vertex, but evener in size and not so dense. Scutellum (fig. 5-c) tongue-shaped, elongate and flattened. Elytral striae fine, not grooved, with elliptic punctures discontinually; strial intervals flattened with minute sparse punctures; interpunctate surface smooth without any creases. Prosternal punctures larger and sparser than pronotal ones. Propleural punctures smaller than prosternum. Prosternal process in profile as figured (fig. 5-d); hind apex obtusely pointed with a small obscure emargination. Male genitalia as figured (fig. 45); median lobe rather gently narrowing apically; apex of each paramere transversely cut and narrow.

Holotype, ♂, and isotypes, 2♂♂, 3♀♀, Tanansha, Taiwan, June 9, 1972, Y. KIYOYAMA leg. Paratypes: 1♂, Kenting Park, Taiwan, May 24, 1970, Y. KIYOYAMA leg.; 1♂, ditto, June 13, 1971, Y. MAÉDA leg.; 1♂, Liukuei, Kaohsiung Hsien, Taiwan,



Figs. 4-5. 4, *Chiagosnius taikozanus* (Miwa, 1928), ♂ ;
5, *Chiagosnius apayao* Kishii, sp. nov., ♂.
a, Antennal joints, 1st to 5th ; b, hind angle of pronotum ; c, scutellum ; d, prosternal process in profile.

June 21, 1972, Y. Kiyoyama leg. ; 1♂, Gokang Shan near Liukuei, ditto, May 5, 1991, M. Yagi leg. Some types are in the collection of Mr. T. Shibata and Mr. M. Yagi.

In *obscuripes*, the median lobe of male genitalia is remarkably broad and abruptly narrowed near the apex, and each paramere is clearly rounded at apical margin.

Chiagosnius opacipennis Kishii, sp. nov. (Figs. 6, 21 & 47)

Male, 11.25×3.00-12.30×3.35 mm., female, 11.70×3.20-13.80×3.75 mm. Robust, obviously massive ; subcylindrical, elongate and parallel-sided, with remarkably shining at pronotum and entirely opaque at elytra, without any metallic lustre on whole surface completely. Pitchy black except for pronotum, propleuron and anterior lobe of prosternum fresh red, but a little infuscate at anterior border of pronotum narrowly, apical part of basal joint in antennae and 2nd joint a little dusky brownish, and leg segments feebly brownish at both extremities. Pubescence not so long, rather sparse and curved at pronotum, distinctly dense and straightened at elytra, semierect, rather tender and yellowish white with tint.

Head broad, feebly convex at summit, then abruptly declining antero-inferiorly and subperpendicular at frons, which is flattened without any depression; relative width of each eye and distance across eyes at upper views as 17 : 72 (ca. 4.2 times); frontal margin perfectly absent at middle, but clearly carinate and upheaved up before eyes briefly; frontal groove absent completely; antennal sulci subcircular, small and shallow; labrum large, hemicircular, feebly elevated and faced ahead, with large coarse and sparse punctures. Vertical punctures single, plainly large, dense and uneven in size; interpunctate space smooth entirely and clearly narrower than puncture diameter averagely, and somewhat reticulate partly.

Antennae distinctly thick, a little exceeding apices of pronotal hind angles by apical joint in male, and hardly attaining to bases of angles in female; relative lengths and widths from basal joint to 5th as 24/11, 8/9.5, 22/13, 22/17.5 and 22/17.5 respectively in male (length/width) (fig. 6-a), and 27/18, 9/10.5, 24/14.5, 24/17 and 22.5/18 in female; basal joint massive and roundly swollen at apico-anterior part, 2nd globose, 3rd triangular, 3rd to 10th serrated, 4th to 10th wide hanging-bell-formed, and 11th subparallel-sided and a little longer than 10th (fig. 6-b).

Pronotum rather trapezoid, clearly convex up roundly, with a weak medio-longitudinal furrow at posterior slope, widest at apices of hind angles, then gently straightly narrowing forwards; relative median length and width as 100 : 84; hind angles (fig. 6-c) elongate, plainly divergent postero-laterally, acutely pointed at apices, with short and rather obscure bicarination, of which inner carina ill-defined and shorter than the outer, and scarcely exceeding base of angle in the outer one; basal furrows obviously large and roundly notched. Discal punctures distinctly smaller and sparser than those of head, generally becoming sparser to rear border and a little larger antero-laterally; interpunctate space completely glabrous and average width among punctures conspicuously wider than puncture diameter, namely ca. 3 times or more.

Scutellum (fig. 6-d) elongate, tongue-shaped, weakly elevated longitudinally, declivous antero-inferiorly, subparallel-sided at anterior half, then substraightly converging posteriorly, with hind end broadly rounded; anterior edge roundly upheaved; relative median length and width as 45 : 23; punctures sparse, ill-defined and finer than pronotal ones.

Elytra elongate, wider than median width of pronotum, parallel-sided from humeri to beyond middle, then progressively and roundly tapering posteriorly ; elytral ends ordinary-formed and sutural ends not mucronate ; striae fine and continuously grooved with deep, elliptic and discontinual punctures ; strial interstices slightly elevated with dense, rough and large punctures and exceedingly rugged by rugose transverse distinct and irregular crease-like elevations wholly.

Prosternum subquadrate, a little narrowed at middle, feebly elevated longitudinally below, with punctures plainly larger and denser than those of pronotum, especially obvious at lateral borders ; anterior lobe bent downwards transversely, furrowed narrowly at base, and well-definedly carinate at frontal edge, with dense and coarse punctures. Prosternopleural sutures broadly carinate and glabrous at pleural edges, slightly sinuate medianly and closed entirely at fore ends. Prosternal process in profile (fig. 6-e) slightly concave behind procoxae, elongate, and not so thick, with hind apex briefly bifurcated. Propleural punctures distinctly finer and sparser than prosternal ones, but progressively becoming denser and larger anteriorly as well as laterally, without punctures at posterior borders quite and broadly ; interpunctate surface glabrous completely. Metasternal punctures smaller and sparser than prosternal ones and ill-limited. Male genitalia as figured (fig. 47) ; apex of each paramere not broadened and obtusely projected apically.

Holotype, ♂, and isotypes, 2♂♂, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991, M. YAGI leg. Paratypes : 1♂, Kenting-Park, Pingtung Hsien, May 21, 1970, Y. KIYOYAMA leg. ; 1♂, 2♀♀, ditto, June 16, 1971, Y. MAÉDA leg. ; 1♂, 1♀, Too Nah near Mao Ling, Kaohsiung Hsien, June 17, 1986, K. BABA leg. ; 1♀, Manzhou, Pingtung Hsien, May 2, 1991, M. YAGI leg.

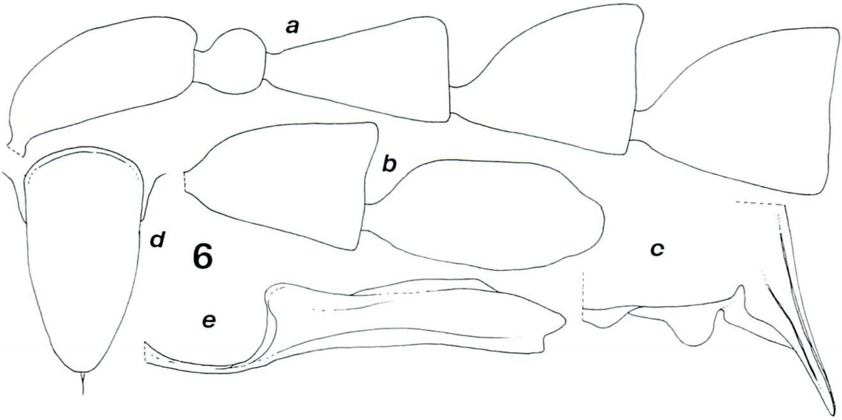


Fig. 6. *Chiagosnius opacipennis* KISHII, sp. nov., ♂.
a, Antennal joints, 1st to 5th ; b, ditto, 10th & 11th ; c, hind angle of pronotum ; d, scutellum ; e, prosternal process in profile.

This new *Chiagosnius* is unique among the Taiwanese species by having no metallic lustre, remarkable opaque elytra, fine and sparse punctures of the pronotum, and a small emargination at apex of the prosternal process, but best of all it may be easily distinguishable by the forms of parameres in the aedeagus (see figs. 43 to 47).

Chiagosnius vittiger formosanus (MIWA, 1927) (Fig. 24)

Megapenthes formosanus MIWA, 1927, Ins. Mats., 2 (1) : 19, Pl. 1, fig. 13 (♂) (Niitaka, Ranrun & Tamaho in Formosa).

1 ♂, 1 ♀, Kiantoa Shan near Liukuei, Kaohsiung Hsien, May 6, 1991.

Tribe Adrastini CANDÈZE

Parasilesis sauteri sauteri (MIWA, 1930)

Silesis Sauteri MIWA, 1930, Wien. ent. Zeit., 47 (2) : 95 & 96 (Fuhosho, Kosempo, Taihorin, Taihorinsho, Horisha, Musha, Mt. Arisan, Tabo & Shinchiku in Formosa).

1 ♂, Saichitau, Nantou Hsien, May 15, 1989.

Glyphonyx longulus MIWA, 1930 (Figs. 26 & 42)

Glyphonyx longulus MIWA, 1930, Wien. ent. Zeit., 47 (2) : 94-95 (Kosempo, Horisha & Rono in Formosa).

1 ♂, 1 ♀, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991.

In 1991, I had reported this species from Taiwan based on the collection by Dr. K. BABA, however, according to my latest examination the determination was wrong, and the examples were an undescribed species without doubt. On this *Glyphonyx* I would like to describe at an early date in the other paper.

Glyphonyx rubricollis MIWA, 1928 (Fig. 25)

Glyphonyx rubricollis MIWA, 1928, Ins. Mats., 3 (1) : 49 & 50, Pl. 1, fig. 16 (Arisan, Horisha, Kagi, Koshun, Ranrun, Tompo, Baibara & Takesaki in Formosa).

3 exs., Angchuikhoe near Liukuei, Kaohsiung Hsien, May 4, 1991.

Glyphonyx muneaka KISHII, 1991 (Fig. 27)

Glyphonyx muneaka KISHII, 1991, Trans. Essa ent. Soc., Niigata, (72) : (22) & 35, figs. 7, 32 & 63 (Mt. Sen-pei near Liu-kui, Mt. Wu-kon Shan near Liu-kui, Mt. Ta-yuen Shan near Liu-kui in Taiwan).

3 exs., Angchuikhoe near Liukuei, Kaohsiung Hsien, May 4, 1991 ; 6 exs., Gokang Shan near Liukuei, ditto, May 5, 1991 ; 1 ex., Kiantoa Shan near Liukuei, ditto, May 6, 1991.

Glyphonyx taiwan KISHII, 1991 (Figs. 28 & 41)

Glyphonyx taiwan KISHII, 1991, Trans. Essa ent. Soc., Niigata, (72): (24) & 53, figs. 19, 45 & 77 (Tsai-tei-ku near Liu-kuei in Taiwan).

3♂♂, 2♀♀, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991.

I will republish the figure of male genitalia because of the figures in the original description (1991: 58, fig. 45-a, b) being defective at apical parts (fig. 41).

Subfamily **Melanotinae** CANDÈZE

Priopus (*Priopus*) *angulatus* (CANDÈZE, 1860) (Figs. 8, 30 & 49)

Diploconus angulatus CANDÈZE, 1860, Mém. Soc. roy. Sc. Liège, 15: 291 & 297 (Hong-Kong).

Diploconus separandus KIRSCH, 1875, Mitteil. zool. Mus. Dresden, 1: 32 (Malacca).

1♂, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991.

Hitherto this species had belonged under the genus *Neodiploconus*, but in 1990 as the result of HAYEK's study on the world Melanotine-elaterids, *Neodiploconus* HYSLOP, 1921 was synonymized to the genus *Priopus* CASTELNAU, 1840 (Type-species: *Priopus frontalis* CASTELNAU, 1840) with *Thaumastiellus* SCHWARZ, 1902. The Taiwanese species of genus *Priopus*, I think, should be divided at least in two groups as follow as:

Subgenus *Priopus* s. str.: *angulatus* CANDÈZE and *castaneus* MIWA.

Subgenus *Pulchronotus* FLEUTIAUX, 1933 (Type-species: *Diploconus ornatus* CANDÈZE, 1894): *sanguinicollis* MIWA, *kubotai* W. SUZUKI and *elegans* SZOMBÅTHY.

Priopus (*Priopus*) *yagianus* KISHII, sp. nov. (Figs. 7, 31 & 50)

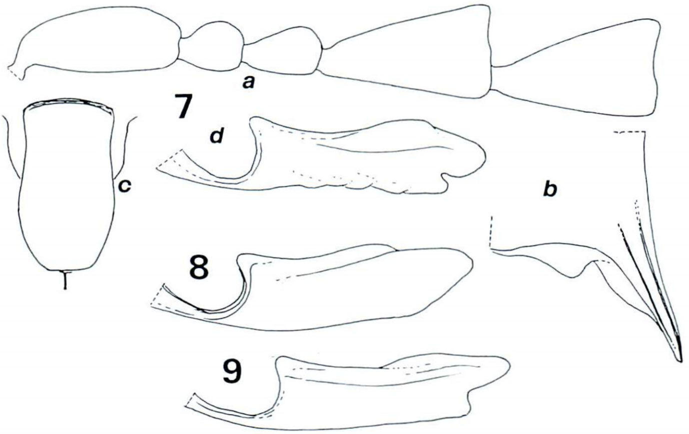
Male, 12.35×3.35 mm. Stout, elongate fusiform, well convex above longitudinally as well as ventral surface, widest at apices of pronotal hind angles, then gently narrowing anteriorly and posteriorly, and distinctly shining all over. Reddish brown entirely, but somewhat infuscate at lateral sides of head, anterior border and posterior edge of pronotum. Pubescence long, dense, straightened, thick, erect and yellowish brown with clear lustre.

Head not so broad, flattened evenly, slightly declining antero-inferiorly, without any furrow, parallel-sided at eye margins; relative width of each eye and extent between eyes at upper sights as 22 : 70 (ca. 3 times); frontal edge plainly expanded roundly ahead and obviously carinate; frontal groove deep and broad, with a median elevation, coarsely punctate with large dense punctures, remarkably overhanged at upper side. Vertical punctures large, dense, ocellated and uneven in size, generally smaller at lateral sides; interpunctate space smooth, but conspicuously narrower than puncture diameter averagely.

Antennae thick, rather elongate, but apical joint hardly attaining to apices of hind angles of pronotum; relative lengths and widths from basal joint to 5th as 30/22, 10/9, 13/9.5, 26.5/15 and 26/14.5, respectively (length/width) (fig. 7-a); basal joint massive and rather barrel-formed, 2nd globular, 3rd triangular, 4th to 10th perceptibly serrated, gently becoming slender terminally, and 11th elongate rhombic and a little longer than preceding joint.

Pronotum trapezoid, subparallel-sided at middle, then feebly narrowing roundly ahead, distinctly divergent postero-laterally, simply convex up, without any median line nor furrow at summit, but having a feeble medio-longitudinal depression at hind slope only; relative median length and width as 100 : 88; hind angles (fig. 7-b) plainly elongate, acutely projecting postero-divergently, sharply pointed at apices, with bicarination well defined at outer carina and ill-defined at the inner; basal margin simply emarginate. Discal punctures a little sparser and smaller than those of head, ocellated entirely, becoming gradually larger and denser laterally; interpunctate space smooth entirely and average width among punctures subequal to puncture diameter or feebly wider.

Scutellum (fig. 7-c) elongate, quadrate, declining antero-inferiorly, rather flattened, almost parallel-sided, but slightly narrowed behind fore corners; anterior edge rounded and flattened glabrously; posterior end



Figs. 7-9. 7, *Priopus* (*Priopus*) *yagianus* KISHII, sp. nov., ♂.
a, Antennal joints, 1st to 5th; b, hind angle of pronotum; c, scutellum; d, prosternal process in profile.
8, *Priopus* (*Priopus*) *angulatus* (CANDÈZE, 1860), ♂, prosternal process in profile; 9, *Priopus* (*Priopus*) *castaneus* (MIWA, 1930), ♂, ditto.

rather truncated transversely; punctures dense and clothed obscurely; relative median length and width as 38 : 20.

Elytra widest at humeri, then progressively tapering substraightly to posterior one-fourth and roundly convergent at elytral ends, which are feebly emarginated, with sutural ends mucronate briefly; striae fine, grooved continually, with ill-defined elliptic and discontinuous punctures; strial interstices flattened, with ill-limited coarse punctures and rugose transverse irregular and crease-like sculptures entirely.

Prosternum narrow, a little widened at procoxal cavities, feebly sinuate medianly, and divergingly extending ahead, medio-longitudinally elevated, smooth with punctures almost single, larger and denser than pronotal ones; anterior lobe roundly expanded ahead and slightly bent downwards. Prosterno-pleural sutures single and entirely closed at anterior ends. Prosternal process in profile (fig. 7-d) elongate, rather thick, scarcely bent behind procoxae, then straightly projecting back; hind apex with a small notch. Propleural punctures sparser and a little smaller than prosternal ones. Metasternal punctures obscurely punctate, a little sparser and finer than propleural ones. Aedeagus as figured (fig. 50); median lobe remarkably elongate; emargination at base of apico-lateral expansion of each paramere distinctly small.

Female unknown.

Holotype, ♂, Gokang Shan near Liukuei, Kaohsiung Hsien, May 7, 1991, M. YAGI leg.

In the external appearance this new *Priopus*-species is closely allied to two known Taiwanese species: *P. angulatus* (CANDÈZE, 1860) and *P. castaneus* (MIWA, 1930), though it may be easily distinguishable from the latters by the shape of the prosternal process and the aedeagus.

Priopus (*Priopus*) *castaneus* (MIWA, 1930), comb. nov. (Figs. 9, 29 & 48)

Neodiploconus castaneus MIWA, 1930, Wien. ent. Zeit., 47 (2): 92 (Kosempo, Alikang, Kagi & Kanshirei in Formosa).

2♂♂, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991.

Melanotus (*Spheniscosomus*) *melanotoides melanotoides* (MIWA, 1930)

Spheniscosomus melanotoides MIWA, 1930, Trans. nat. Hist. Soc. Formosa, 20 (107): 61 (Mt. Arisan, Musha, Kwarenkô & Horisha in Formosa).

1♀, Tengszi, Kaohsiung Hsien, May 12, 1989.

Melanotus (*Spheniscosomus*) *frequens* (MIWA, 1930)

Spheniscosomus frequens MIWA, 1930, Trans. nat. Hist. Soc. Formosa, 20 (107): 61

& 62 (Horisha, Mt. Arisan, Musha, Mt. Niitaka, Kyuhabon, Sankakuhô & Mt. Nôkô in Formosa).

1♂, Tengszi, Kaohsiung Hsien, May 11, 1989.

Melanotus (*Sphensicosomus*) *vunun* Kishii, 1991

Melanotus (*Spheniscosomus*) *vunun* Kishii, 1991, Trans. Essa ent. Soc., Niigata, (73):(6 & 7) & 12-15, figs. 2, 11 & 24 (Ten-shin-fu near Liu-kuei in Taiwan).

1♂, Saichitau, Nantou Hsien, May 15, 1989.

Melanotus (*Melanotus*) *oblongulus* Kishii, 1989 (Fig. 34)

Melanotus (*Melanotus*) *oblongulus* Kishii, 1989, Trans. Essa ent. Soc., Niigata, (68):(32) & 39-41, figs. 11, 30 & 48 (Shi-nan Shan & Shyk Shan near Liu-kui in Taiwan).

1♀, Gokang Shan near Liukuei, Kaohsiung Hsien, May 5, 1991, at light; 1♀, ditto, May 7, 1991.

Melanotus (*Melanotus*) *takasago* Kishii, 1989

Melanotus (*Melanotus*) *takasago* Kishii, 1989, Trans. Essa ent. Soc., Niigata, (68): (33), 44 & 45, figs. 14, 32 & 53 (Pilu Simmu, Chu-yun Shan & Lo-shan Spa in Taiwan).

2♂♂, Tengszi, Kaohsiung Hsien, May 11, 1989; 1♂, ditto, May 12, 1989.

Melanotus (*Melanotus*) *yagianus* Kishii, 1990

Melanotus (*Melanotus*) *yagianus* Kishii, 1990, Ent. Rev. Japan, 45(1):23-25, figs. 4, 19 & 25 (Mt. Kuangtou-shan in Taiwan).

1♀, Tengszi, Kaohsiung Hsien, May 12, 1989.

Melanotus (*Melanotus*) *brunniopacus* Kishii, 1989 (Fig. 33)

Melanotus (*Melanotus*) *brunniopacus* Kishii, 1989, Trans. Essa ent. Soc., Niigata, (68):(33 & 34) & 47-49, figs. 16, 33 & 51 (Liu-kui & Mt. Rara-san in Taiwan).

1♀, Tengszi, Kaohsiung Hsien, May 12, 1989.

Melanotus (*Melanotus*) *amianus* Kishii, 1992 (Fig. 36)

Melanotus (*Melanotus*) *amianus* Kishii, 1992, Bull. Heian High Sch., 36:21-23, figs. 9 & 50 (Liu-kui, Musha, Mt. Rara-san, Puli, Nanshanchi, Shi-nan Shan & Tengszi in Taiwan).

1♀, paratype, Nanshanchi, Nantou Hsien, March 16, 1980; 1♀, paratype, Tengszi, Kaohsiung Hsien, May 11, 1989.

Subfamily **Cardiophorinae** CANDÈZE

Tribe Cardiophorini CANDÈZE

Cardiotarsus rarus MIWA, 1927

Cardiotarsus rarus MIWA, 1927, Ins. Mats., 2 (2) : 108, fig. 4 (Musha in Formosa).
1 ♂, Kiantoa Shan near Liukuei, Kaohsiung Hsien, May 6, 1991.

Cardiotarsus yagii KISHII, 1992 (Fig. 32)

Cardiotarsus yagii KISHII, 1992, Ent. Rev. Japan, 47 (1) : 8-10, figs. 2 & 5-8 (Mt. Kuangtoshan in Taiwan).

1 ♂, Kiantoa Shan near Liukuei, Kaohsiung Hsien, May 6, 1991 ; 1 ♀, Gokang Shan near Liukuei, ditto, May 7, 1991.

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Explanation of Plates 1-5

Pl. 1, fig. 10. *Agrypnus* (*Sagojyo*) *kawamurae* (MIWA, 1929), ♂, 9.9 mm.
11. *A.* (*S.*) *taiwanus* (MIWA, 1927), ♀, 10.9 mm.
12. *Adelocera* (*Brachylacon*) *shirozui* (ÔHIRA, 1967), ♂, 5.0 mm.
13. *Lacon* (*Alaotypus*) *kikuchii* (MIWA, 1929), ♀, 9.4 mm.
14. *Subathous formosensis* KISHII, sp. nov., ♂, 12.95 mm.
15. *Megapenthes tattakensis* ÔHIRA, 1966, ♀, 11.1 mm.
16. *M. suturalis* (MATSUMURA, 1911), ♂, 10.4 mm.
17. *Procraerus* (s. str.) *sonami* (MIWA, 1929), ♀, 9.1 mm.

18. *Neotrichophorus rubuginosus* Ôhira, 1966, ♀, 12.5 mm.
19. *Chiagosnius taikozanus* (Miwa, 1928), ♂, 9.4 mm
20. *C. apayao* Kishii, sp. nov., a. ♂, paratype, 11.3 mm., b. ♀, paratype, 12.5 mm.
21. *C. opacipennis* Kishii, sp. nov., a. ♂, holotype, 11.8 mm., b. ♀, paratype, 13.3 mm.
22. *C. obscuripes* (Gyllenhal, 1817), ♂, 14.5 mm.

Pl. 2, fig. 23. *Chiagosnius sanguinicollis* (Miwa, 1928), ♀, 14.95 mm.
24. *C. vittiger formosanus* (Miwa, 1927), ♂, 10.3 mm.
25. *Glyphonyx rubricollis* Miwa, 1928, ♀, 8.5 mm.
26. *G. longulus* Miwa, 1930, ♂, 7.95 mm.
27. *G. muneaka* Kishii, 1991, ♂, 7.6 mm.
28. *G. taiwan* Kishii, 1991, ♂, 5.3 mm.
29. *Priopus* (s. str.) *castaneus* (Miwa, 1930), ♂, 12.1 mm.
30. *P.* (s. str.) *angulatus* (Candèze, 1860), ♂, 13.2 mm.
31. *P.* (s. str.) *yagianus* Kishii, sp. nov., ♂, holotype, 12.4 mm.
32. *Cardiotarsus yagii* Kishii, 1992, ♂, 8.8 mm.
33. *Melanotus* (s. str.) *brunniopacus* Kishii, 1989, ♀, 21.9 mm.
34. *M.* (s. str.) *oblongulus* Kishii, 1989, ♀, 16.5 mm.
35. *M.* (s. str.) *takasago* Kishii, 1989, ♂, 13.8 mm.
36. *M.* (s. str.) *amianus* Kishii, 1992, ♀, paratype, 14.5 mm.

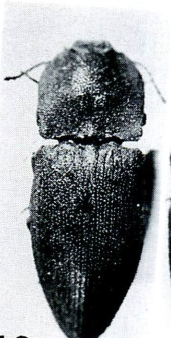
Pl. 3, fig. 37. *Lacon* (*Alaotypus*) *kikuchii* (Miwa, 1929), thorny formation in bursa copulatrix.
38. *Adelocera* (*Brachylacon*) *shirozui* (Ôhira, 1967), a. male genitalia, b. ditto, apical part.
39. *Subathous formosensis* Kishii, sp. nov., a. male genitalia b. ditto, apical part.
40. *Agriotes tonkinensis* (Fleutiaux, 1894) (Vietnamese ex.), a. male genitalia, b. ditto, apical part.
41. *Glyphonyx taiwan* Kishii, 1991, a. male genitalia, b. ditto, apical part, c. sclerotic plates in bursa copulatrix.
42. *G. longulus* Miwa, 1930, a. male genitalia, b. ditto, apical part.

Pl. 4, figs. 43-47, a. male genitalia, b. ditto, apical part.
43. *Chiagosnius obscuripes* (Gyllenhal, 1817).
44. *C. sanguinicollis* (Miwa, 1928).
45. *C. apayao* Kishii, sp. nov., paratype.
46. *C. taikozanus* (Miwa, 1928).
47. *C. opacipennis* Kishii, sp. nov., paratype.

Pl. 5, figs. 48-50, a. male genitalia, b. ditto, apical part.
48. *Priopus* (s. str.) *castaneus* (Miwa, 1930).
49. *P.* (s. str.) *angulatus* (Candèze, 1860).
50. *P.* (s. str.) *yagianus* Kishii, sp. nov., holotype.

Ent. Rev. Japan, Vol. XLVIII, Pl. 1.

June, 1993.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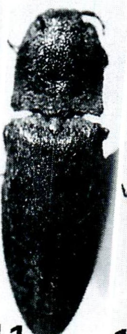
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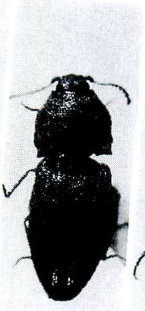
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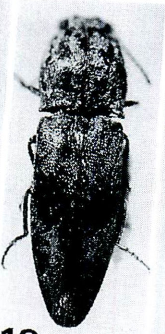
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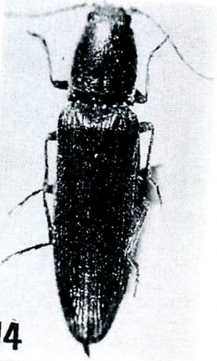
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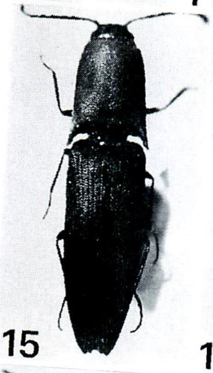
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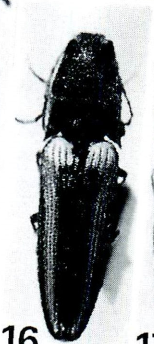
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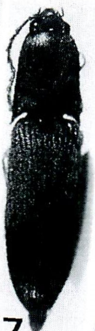
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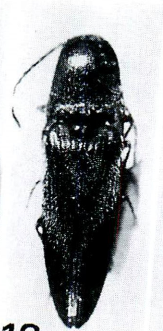
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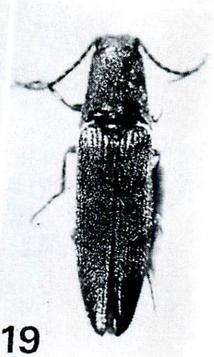
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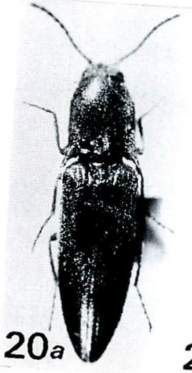
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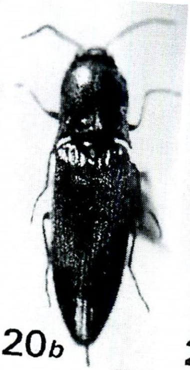
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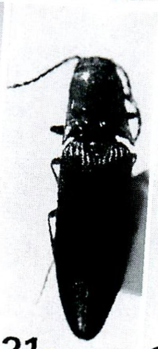
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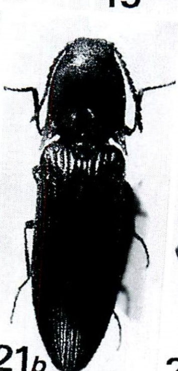
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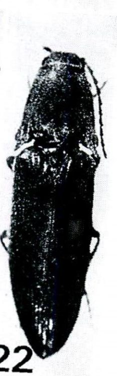
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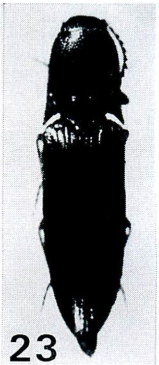
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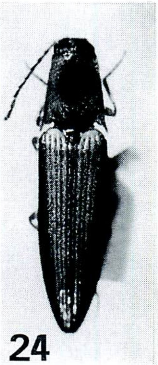
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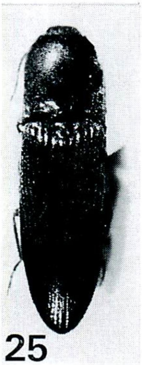
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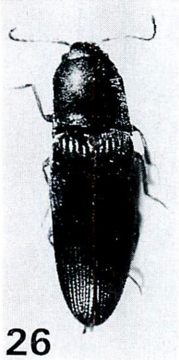
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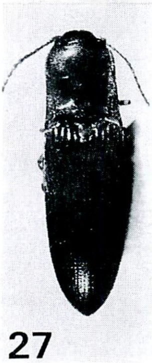
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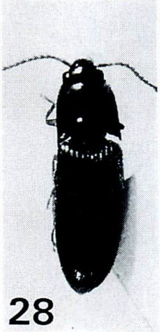
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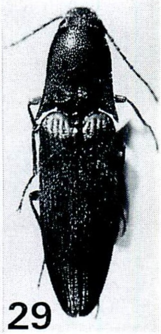
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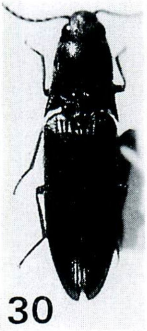
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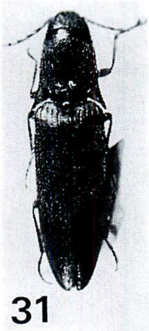
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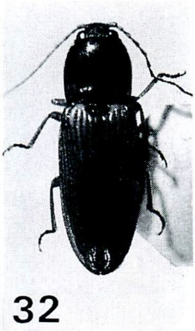
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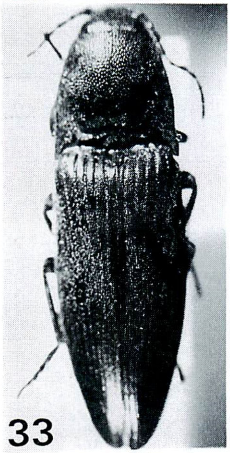
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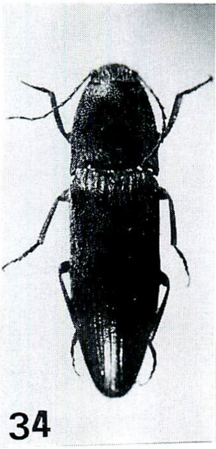
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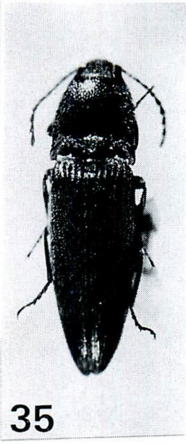
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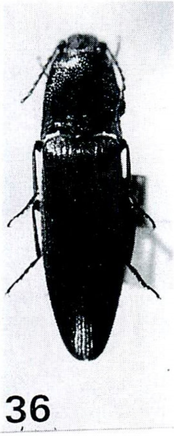
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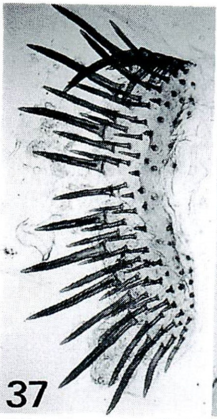
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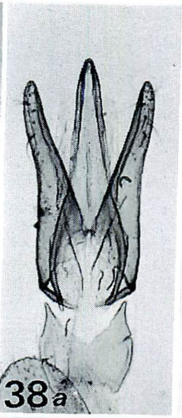
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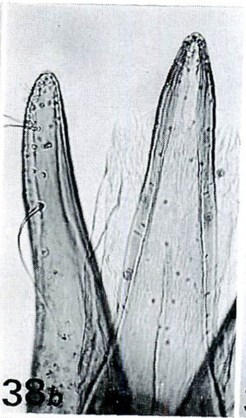
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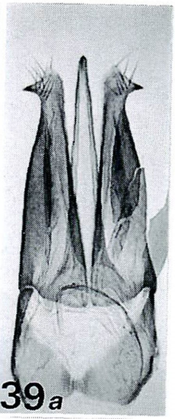
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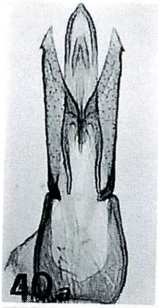
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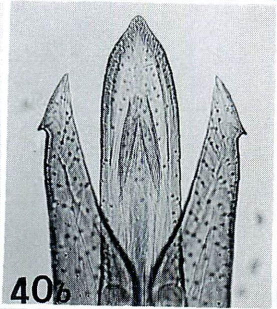
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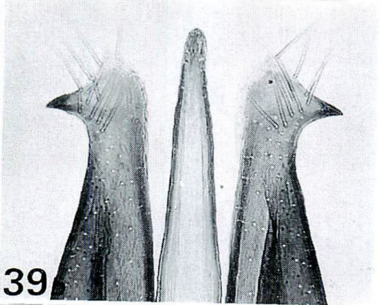
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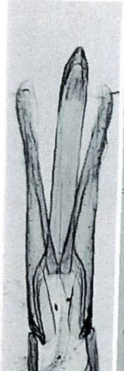
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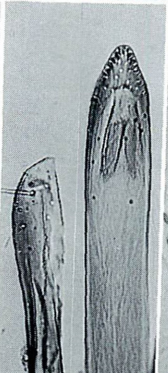
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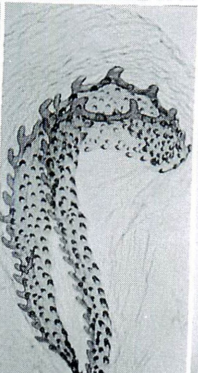
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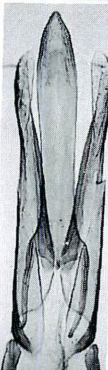
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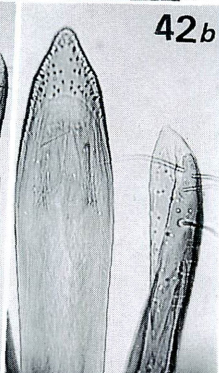
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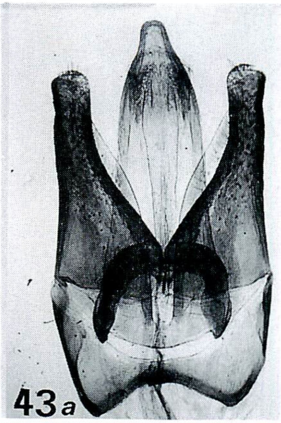

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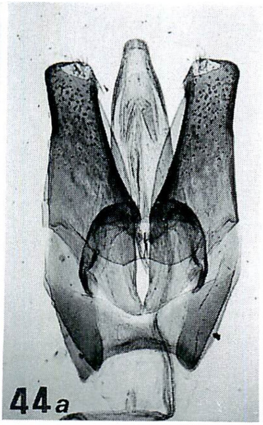

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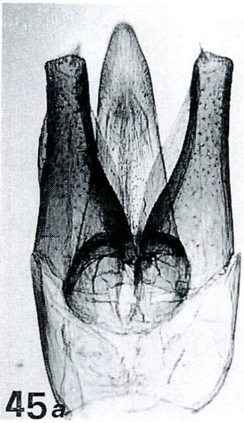

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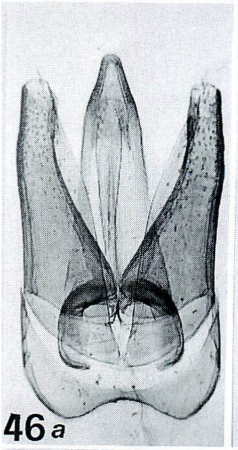

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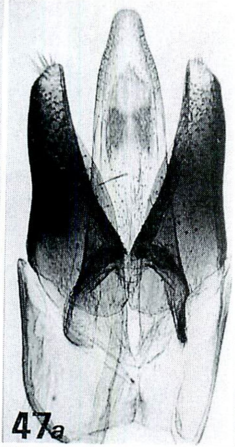

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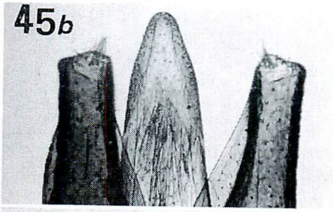

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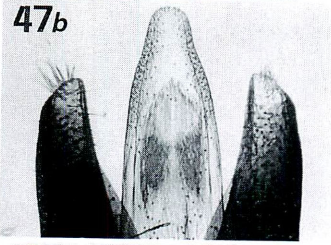

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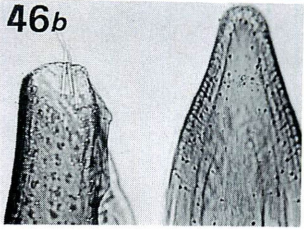

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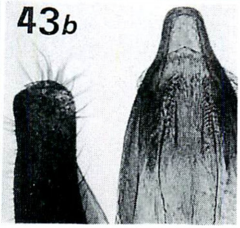

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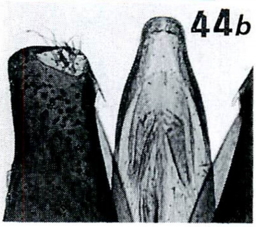

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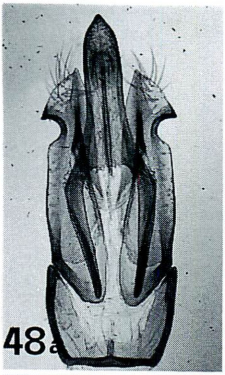
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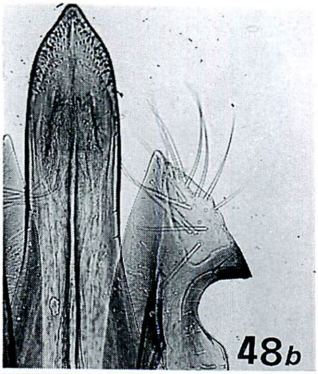
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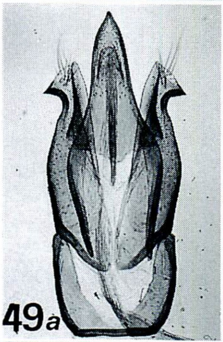
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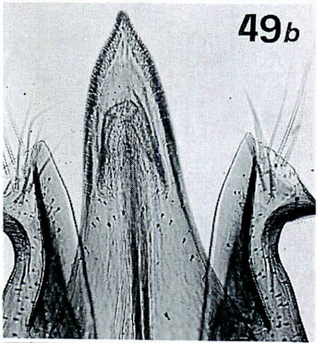
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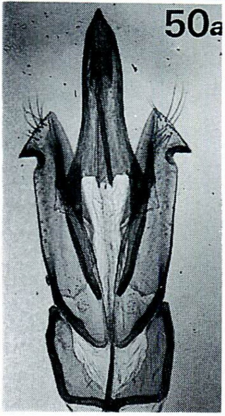
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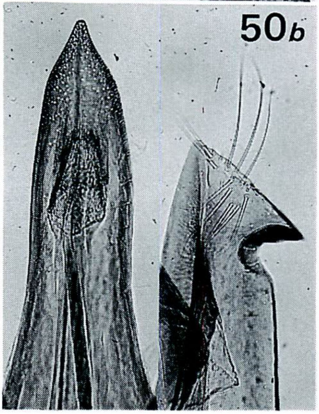
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(T. Kishii photo.)

A New Subspecies of the Genus *Chrysobothris* ESCHSCHOLTZ from Japan (Coleoptera, Buprestidae)

By Kôyô Akiyama

15-10, Daidô 2-chômé, Kanazawa-ku, Yokohama, Kanagawa, 236 Japan

Abstract A new subspecies of the genus *Chrysobothris* from Japan is described under the name of *C. amurensis ohmomoi.*

In 1979, Akiyama and Ohmomo first recorded of *Chrysobothris amurensis* Pic from Japan. Recently, I was able to examine the nominate subspecies of *C. amurensis* from Amur, Far East. After my careful examination, this subspecies can be easily distinguished from the Japanese population. In this paper, the latter is described. The holotype will be deposited in the National Science Museum (Nat. Hist.), Tokyo.

I wish to express my sincere gratitude to Prof. Gayle H. Nelson, head of the Department of Anatomy, College of Osteopathic Medicine of the Pacific, Pomona, California, for his kindness in reading the original manuscript and making suggestions, and to Mr. Hiroshi Fujita, Tokyo, Mr. Mark Kalashian, Institute of Zoology, Yerevan, Armenia, Mr. Kunio Kumé, Tokyo, Dr. Toshihiko Nakamura, Tokyo, Dr. Sadahiro Ohmomo, National Grassland Research Institute, Tochigi, Prof. Hiroyuki Sasaji, Biological Laboratory, Fukui University, Fukui, and Dr. Mark G. Volkovitsh, Zoological Institute, Russian Academy of Science, St. Petersburg, Russia, for their kind offer of material.

Chrysobothris amurensis ohmomoi subsp. nov. (Figs. 2, 4)

This new subspecies is different from the nominate subspecies in the following characteristics: Female.[1] 1) Elytra with strong and distinct outer costae, while in nominate subspecies, they are indistinct; 2) last visible abdominal sternite very feebly but distinctly arcuately emarginate, while in nominate subspecies, it is rounded.

Length: 8.7–9.3 mm; width: 3.4–3.9 mm.

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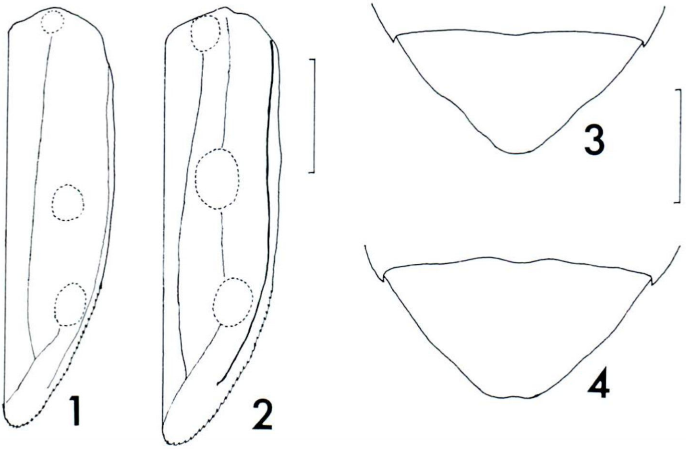
[1] I have not seen a male of the nominate subspecies.

〔Ent. Rev. Japan, Vol. XLVIII, No. 1, pp. 35–36, June, 1993〕



Figs. 1-4. 1, 3, *Chrysobothris amurensis amurensis* Pic ; 2, 4, *C. amurensis ohmomoi* subsp. nov.
1-2, Right elytra ; 3-4, last visible abdominal sternites ♀. (Scale bars : 1-2, 2 mm ; 3-4, 1 mm.)

Holotype : ♀, Nippara, Okutamamachi, Nishitamagun, Tokyo Metr., 24. V. 1965, T. Nakamura leg. Paratypes : 1♂, Moniwa, Fukushima Pref., 28. VII. 1973, S. Ohmomo leg. ; 1♂, Kôzawa, Katashinamura, Gumma Pref., VII. 1973, K. Kumé leg. ; 1♀, ditto, 30. VI. 1978, S. Ohmomo leg. ; 1♀, Mts. Daibosatsu, Yamanashi Pref., 21. VII. 1969, H. Fujita leg. ; 1♀, Koike, Ohno City, Fukui Pref., 16. VII. 1978, H. Sasaji leg.

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Akiyama, K. and S. Ohmomo, 1979. Notes on the Japanese Buprestidae (1). *Chrysobothris amurensis* Pic, new to the fauna of Japan (Col. Bupr.). Sci. Rept. Yokosuka City Mus., 26 : 67-71.

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Pic, M., 1904. Diagnose de Coléoptères Asiatiques provenat surtout de Sibérie (1). L'Échange, Revue Linnéenne, 20 : 25-27.

Théry, A., 1940. Revision des *Chrysobothris* (Col. Bupr.) de Chine, actuellement connus et descriptions d'espèces nouvelles. Notes Ent. Chinoise, 7 : 139-170, 16 figs.

A Study of the Genus *Augolesthus* MOTSCHULSKY, 1872 (Coleoptera, Tenebrionidae, Cnodalonini)

By KIMIO MASUMOTO

Institute of Human Living Sciences,
Otsuma Women's University
12, Sanbancho, Chiyoda-ku, Tokyo, 102 Japan

Abstract A cnodalonine tenebrionid genus, *Augolesthus* MOTSCHULSKY, 1872 is revised for the first time. *A. andoi* sp. nov. is described and a new subgenus *Falsoaugolesthus* is erected. Four new synonyms are presented. A lectotype is designated for *A.* (*Falsoaugolesthus*) *pulcher* (PIC, 1927). A key to all the species of the genus is also given.

The genus *Augolesthus* comprises about ten species distributed in the Indochinese and Malayan Subregions. MOTSCHULSKY (1872) erected the genus for a beautiful beetle from the Indes orientales. GEBIEN (1941) included the genus in the tribe Tenebrionini in his catalogue of Tenebrionidae. He (1943) also listed a genus, "*Chrysomaia* GEBIEN i. l.", in the tribe Strongyliini. KULZER (1952) asserted that GEBIEN's generic name was not valid because GEBIEN did not leave a description of it. So he erected the genus *Chrysomaia* KULZER and included it in the tribe Cnodalonini. He recognized two named species and four new ones as members of the genus. KASZAB (1983) noticed that *Chrysomaia* was synonymous with *Augolesthus* and proposed six new combinations under the genus. I (1986) described two new species and gave a new name for a preoccupied species. I also proposed two new combinations at the same time.

Last September, I visited Europe and had an opportunity to examine type specimens preserved in the Muséum National d'Histoire Naturelle, Paris and the Természettudományi Múzeum, Budapest.

In this paper, I am going to describe a new species from the Malay Peninsula and erect a new subgenus for two distinct species belonging to the genus. At the same time, I will present four new synonyms and designate a lectotype for a named species.

I wish to express my hearty thanks to Dr. CLAUDE GIRARD, Muséum National d'Histoire Naturelle, Paris and Dr. OTTÓ MERKL, Természettudományi Múzeum, Budapest, who permitted me to examine invaluable specimens including the types for this study. Sincere thanks are due to Mr. KIYOSHI ANDO, manager of the Osaka

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Coleopterological Society, who has assisted me in constant advice concerning tenebrionid beetles.

Genus *Augolesthus* MOTSCHULSKY, 1872

Augolesthus MOTSCHULSKY, 1872, Bull. Soc. Nat. Mosc., 46: 34. Type species: *Augolesthus purpureofasciatus* MOTSCHULSKY, 1872 (nec PIC).

Chrysomaia KULZER, 1952, Ent. Arb. Mus. Frey, 3: 755.

Body rather small, oblong-ovate or elongate and thickened. Elytra with a distinct transverse fascia in some species but not so in others; each surface strongly metallically shining. Head convex posteriorly; clypeus widely emarginate; fronto-clypeal groove distinct; genae obtuse; eyes rather small and transverse; ocular sulci deep and extending posteriad; antennae clavate. Pronotum trapezoidal with lateral margins produced laterad and clearly bordered; apex gently emarginate and not bordered; base bisinuous and rather finely bordered; front angles subrectangular; hind angles feebly acute; dorsum rather strongly convex. Scutellum widely triangular or subcordate. Elytra transversely depressed anteriorly in a species-group, not so in the other, subparallel-sided and punctato-striate, with sides impressed at basal ⅓; intervals almost flat or rather noticeably convex; humeri indentate; apices rounded. Prosternal process obtuse and depressed; mesosternum widely, triangularly depressed.

Subgenus *Falsoaugolesthus* subgen. nov.

Type species: *Augolesthus pulcher* (PIC, 1927).

The new subgenus is easily distinguishable from the subgenus *Augolesthus* by the elytra neither depressed nor convex and the profemora neither thickened nor haired. Two known species will be included in the new subgenus.

Key to the species of the genus *Augolesthus*

1 (4) Elytra neither transversely depressed nor convex anteriorly; protibiae neither thickened nor haired; elytra with a transverse fascia before the middle. (*Falsoaugolesthus* subgen. nov.).

2 (3) Head convex but weakly depressed; pronotum more closely punctate, with apex more strongly produced forwards; elytral fascia shorter, lying in basal ⅖; intervals flat. 8-8.5 mm. Taiwan .... *A.* (*F.*) *kurosawai* MASUMOTO

3 (2) Head convex but not depressed; pronotum less closely punctate, with apex less strongly produced forwards; elytral fascia longer, lying in basal ⅓; intervals gently convex. 7-8 mm. North Vietnam .... *A.* (*F.*) *pulcher* (PIC)

4 (1) Elytra transversely depressed anteriorly and often convex before the depression; protibiae distinctly thickened and haired; elytra with a transverse fascia in some species but without in others. (Subgenus *Augolesthus*).

5 (10) Elytra without a transverse fascia in the middle.

6 (9) Body oblong ovate; elytral striae shallower; intervals less strongly convex; smaller species (6.2-8.5 mm).

7 (8) Elytral intervals distinctly convex in lateral portions; punctures on dorsal surface stronger; lateral margins of pronotum more or less crenulate. 6.2-8.5 mm. Borneo ············ *A.* (s. str.) *borneensis* (KULZER)

8 (7) Elytral intervals flat; punctures on dorsal surface weaker; lateral margins of pronotum not crenulate. 7 mm. Singapore ············ *A.* (s. str.) *protensus* (FAIRMAIRE)

9 (6) Body rather elongate; elytral striae deeper; intervals more strongly convex; larger species (7.5-8.8 mm). Thailand, Laos ······ *A.* (s. str.) *thailandicus* MASUMOTO

10 (5) Elytra with a distinct transverse fascia in the middle.

11 (12) Profemur without a tooth; elytral fascia lying slightly before the middle. 8-9.5 mm. Borneo, Sumatra ················· *A.* (s. str.) *purpureofasciatus* MOTSCHULSKY

12 (11) Profemur with a tooth near apex on front margin.

13 (14) Body noticeably robust; profemur with a distinct tooth near apex; elytral fascia short and lying in basal 1/3, with anterior margin produced forwards. 8.5-9 mm. Borneo ············ *A.* (s. str.) *latus* (KULZER)

14 (13) Body slender.

15 (16) Female (type!): pronotum with apex distinctly narrower than base (more strongly narrowed forwards than backwards); profemoral tooth triangular and acute; elytral fascia shorter, lying in basal 1/3. 9 mm. Java ································ *A.* (s. str.) *violaceofasciatus* (PIC)

16 (15) Female: pronotum somewhat barrel-shaped, with apex as wide as base; profemoral tooth obtuse; elytral fascia longer, lying in basal 2/5. 7-8 mm. Malay Peninsula ············ *A.* (s. str.) *andoi* sp. nov.

1. *Augolesthus* (s. str.) *purpureofasciatus* MOTSCHULSKY, 1872

Augolesthus purpureofasciatus MOTSCHULSKY, 1872, Bull. Soc. Natur., Moscou, 46, 3: 34. Indes orientales.

Encyrtus [sic] *carbunculus* FAIRMAIRE, 1885, Annls. Soc. ent. Belg., 29 (3), 64: cix. Sumatra et Borneo. (**Syn. nov.**)

Chrysomaia elegans KULZER, 1952, Ent. Arb. Mus. Frey, 3: 757. Kurintii/Pajakombo, Sumatra. (**Syn. nov.**)

Distribution: Sumatra, Borneo, Malay Peninsula (New record).

2. *Augolesthus* (s. str.) *protensus* (FAIRMAIRE, 1893)

Eucyrtus protensus FAIRMAIRE, 1893, Notes Leyd. Mus. 15: 44. Singapore.

Distribution: Singapore.

3. *Augolesthus* (s. str.) *violaceofasciatus* (Pic, 1925)

Eucyrtus violaceofasciatus Pic, 1925, Mél. exot.-ent., 43: 9. Java.

Distribution: Java.

4. *Augolesthus* (*Falsoaugolesthus*) *pulcher* (Pic, 1927)

Eucyrtus pulcher Pic, 1927, Mél. exot.-ent., 49: 19. Than-Moi. Lectotype designation: ♂ (labelled as follows: TONKIN, Than Moi, 31-III-1918, JEANVOIE/ *Eucyrtus pulcher* Pic/ type/ TYPE/ Museum Paris Coll. M. Pic/ Lectotype, *Augolesthus pulcher* (Pic), K. Masumoto, 1993). Paralectotypes: 1 ♂ and 1 ♀. (MNHN, Paris).

Distribution: North Vietnam.

5. *Augolesthus* (s. str.) *latus* (Kulzer, 1952)

Chrysomaia lata Kulzer, 1952, Ent. Arb. Mus. Frey, 3: 756.

Eucyrtus purpureofasciatus Pic, 1925, Mél. exot.-ent., 43: 9. (nom. preocc. by *A. purpureofasciatus* Motschulsky, 1872).

Augolesthus pici Masumoto, 1986, Ent. Pap. Y. Kurosawa, Tokyo: 255. (**Syn. nov.**)

Distribution: Borneo.

6. *Augolesthus* (s. str.) *borneensis* (Kulzer, 1952)

Chrysomaia borneensis Kulzer, 1952, Ent. Arb. Mus. Frey, 3: 760. Borneo, Kina-Balu.

Chrysomaia violaceus Kulzer, 1952, Ent. Arb. Mus. Frey, 3: 762. Sudöst-Borneo. (**Syn. nov.**)

Distribution: Borneo, Sumatra.

7. *Augolesthus* (*Falsoaugolesthus*) *kurosawai* Masumoto, 1986 (Fig. 1)

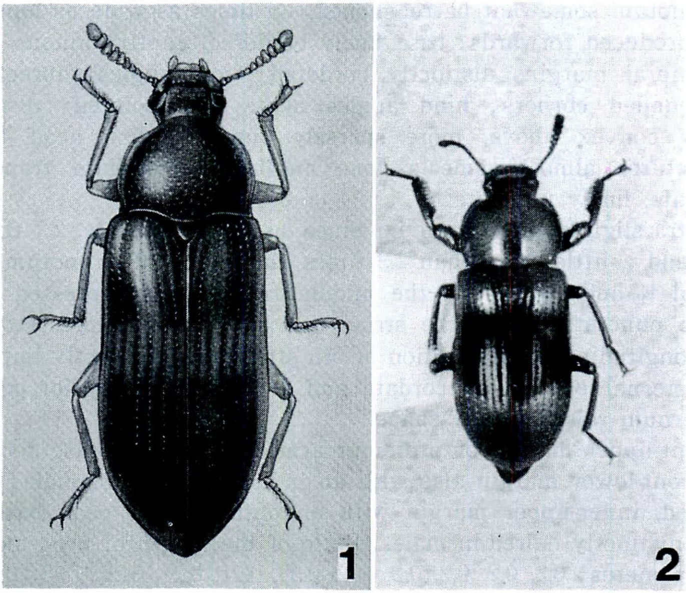
Augolesthus kurosawai Masumoto, 1986, Ent. Pap. Y. Kurosawa, Tokyo: 251. Taiwan.

Distribution: Taiwan.

8. *Augolesthus* (s. str.) *thailandicus* Masumoto, 1986

Augolesthus thailandicus Masumoto, 1986, Ent. Pap. Y. Kurosawa, Tokyo: 253. NW Thailand.

Distribution: Thailand, Laos (New record).



Figs. 1-2. 1, *Augolesthus* (*Falsoaugolesthus*) *kurosawai* MASUMOTO; 2, *Augolesthus* (s. str.) *andoi* sp. nov.

9. *Augolesthus* (s. str.) *andoi* sp. nov. (Fig. 2)

Blackish brown, with 2 basal segments of antennae, mouth parts, tarsi, hairs of tibiae, etc., yellowish brown, head, pronotum and scutellum dark blue, elytra dark blue and bearing greenish tinge with a transverse fascia reddish brown lying before the middle, basal and apical marginal portions of the fascia narrowly bearing violet or purplish tinge, legs dark blue; dorsal surface metallically shining and ventral surface weakly, somewhat sericeously shining. Body rather elongate, fairly strongly thickened.

Head transversely subdecagonal, rather closely punctate, strongly raised posteriorly, clypeus transverse with apex widely emarginate, bordered from frons by fronto-clypeal impression; genae raised, weakly produced obliquely laterad; eyes somewhat securiform in dorsal view, gently convex laterad, with ocular sulcus deep and extending posteriad; diatone about 3.5 times the transverse diameter of an eye. Antennae hardly reaching the middle of pronotum, 6 apical segments thickened and flattened, with 9th widest and 11th largest and quadrate, ratio of the length of each segment from base to apex: 0.4, 0.2, 0.32, 0.27, 0.24, 0.31, 0.33, 0.34, 0.35, 0.36, 0.6.

Pronotum somewhat barrel-shaped, 1.5 times as wide as long; apex feebly produced forwards: base finely bordered, gently sinuous on each side; lateral margins distinctly bordered; front angles subrectangular with rounded corners; hind angles acute and pointed; disc fairly strongly convex above, more sparsely punctate than head, the size of punctures almost same as one another. Scutellum transversely subcordate, finely punctate.

Elytra slightly more than 1.6 times as long as wide, 2.7 times the length and a little more than 1.2 times the width of pronotum, widest at apical 4/9 and thickest at the middle, transversely depressed at basal 1/4; disc punctato-striate, the striae fine and the punctures strong and rather longitudinal, basal portion of 5th stria fairly distinctly impressed.

Prosternal process subcordate and depressed. Posterior portion of mesosternum raised in a V-shape.

Front-upper margin of profemur armed with an obtuse tooth near apex, front-lower margin also with an indistinct tooth in male; protibia thickened, inner-upper margin with an obtuse tooth near base, inner margin distinctly haired in male. Ratio of the length of pro-, meso- and metatarsomeres: 0.3, 0.2, 0.2, 0.2, 1.3; 0.32, 0.21, 0.21, 0.22, 1.32; 0.38, 0.31, 0.33, 1.38, respectively.

Body length: 7–8 mm.

Distribution: Malay Peninsula.

Holotype: ♂, Chegar Perah, Kuala Lipis (Malay Peninsula), Malaysia, 11. VI. 1975, Y. Kiyoyama leg., in the collection of T. Shibata. Paratypes: 1 ex., Padang Tungku, Kuala Lipis, 13. VI. 1975, Y. Kiyoyama leg.; 1 ex., Templer Park, 5. IV. 1977, M. Itoh leg.; 1 ex., Gap, 4. IV. 1978, Y. Kiyoyama leg.

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国際動物命名委員会からのお願い (10)

Applications

The following applications were published on March 25, 1993 in Vol. 50, Part 1 of the Bulletin of Zoological Nomenclature. Comment or advice on these Applications is invited for publication in the Bulletin, and should be sent to the Executive Secretary, I. C. Z. N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, United Kingdom.

Case No.

2846 *Cryptophagus advena* Waltl, 1834 (currently *Ahasverus advena*; Coleoptera): proposed conservation of the specific name.

2758 *Buprestis* Linnaeus, 1758 and *Chrysobothris* Eschscholtz, 1829 (Coleoptera): proposed conservation by the designation of *Buprestis octoguttata* Linnaeus, 1758 as the type species of *Buprestis*.

2837/1 *Poecilonota* Eschscholtz, 1829, *Palmar* Schaefer, 1949 and *Scintillatrix* Obenberger, 1956 (Coleoptera): proposed conservation by the designation of *Buprestis variolosa* Paykull, (1799) as the type species of *Poecilonota* and *B. rutilans* Fabricius, (1777) as the type species of *Scintillatrix*.

2837/2 *Melanophila* Eschscholtz, 1829 and *Phaenops* Dejean, 1833 (Coleoptera): proposed conservation of usage by the designation of *Buprestis acuminata* De Geer, 1774 as the type species of *Melanophila*.

2851 *Nacaduba* Moore, 1881 (Lepidoptera): proposed precedence over *Pepliphorus* Hübner, (1819).

2852 *Banksinella luteolateralis* var. *albothorax* Theobald, 1907 (currently *Aedes* (*Neomelaniconion*) *albothorax*), *B. luteolateralis* var. *circumluteola* Theobald, 1908 (currently *A.* (*N.*) *circumluteolus*) and *A.* (*N.*) *mcintoshi* Huang, 1985 (Diptera): proposed conservation of the specific names and designation of a neotype for *A.* (*N.*) *albothorax*.

2836 *Oecothea* Haliday in Curtis, 1837 (Diptera): proposed conservation and designation of *Helomyza fenestralis* Fallén, 1820 as the type species.

Opinions

The following opinions were published on March 25, 1993 in Vol. 50, Part 1 of the Bulletin of Zoological Nomenclature.

Opinion No.

1705 *Paola vetusta* Smith, 1871 (Protorthoptera): neotype replaced by rediscovered holotype.

1706 *Eurymeloides* Ashmead, 1889 (Homoptera): *Eurymela bicincta* Erichson, 1842 confirmed as the type species, and a neotype designated for *E. bicincta*.

1707 *Scoparipes* Signoret, 1880 (Heteroptera): *Cydnus latipes* Westwood, 1837 confirmed as the type species.

1708 *Proagoderus* Lansberge, 1883 (Coleoptera): conserved.

1709 *Diabrotica undecimpunctata* Mannerheim, 1843 and *D. undecimpunctata howardi* Barber, 1947 (Coleoptera): specific and subspecific names conserved.

(continued to p. 86)

An Interesting New Species of *Liroetiella* from Sabah, Malaysia (Coleoptera, Chrysomelidae, Galerucinae)

By M. S. MOHAMEDSAID[1] and S. KIMOTO[2]

Abstract A new species of galerucine beetle, *Liroetiella antennata* is described from Sabah, Malaysia. The male antennae, which are strongly dilated on segments III & IV, seem to mimic the male antennae of the genus *Cerophysa* CHEVROLAT.

Introduction

While studying the genera *Cerophysa* CHEVROLAT and *Taumacera* THUNBERG in the collection of the Department of Zoology, Universiti Kebangsaan Malaysia, the first author encountered very interesting male specimens of the galerucine beetles. At first, these specimens look like *Monolepta* CHEVROLAT. But when examined the ventral aspect of the beetle, its anterior coxal cavity opened posteriorly, meaning it does not belong to the genus *Monolepta*. The key to the Indochinese galerucine genera provided by KIMOTO (1989), identified the specimens as *Liroetiella* KIMOTO.

However, this *Liroetiella* specimens bear a peculiar shape of antennal segments which is common in the male of the genus *Cerophysa*. In the case of *Cerophysa borneensis* JACOBY, which was described from Sabah (Kinabalu, Borneo), the antennal segments III and IV strongly dilated. Other species of *Cerophysa* with deformed antennae on either segments VI and VII, or segment VIII. The male of the new species herein described seems to mimic the male of the genus *Cerophysa* with respect to the deformed antennal segment. Review on the genera *Cerophysa* and *Taumacera* by the first author is to be published elsewhere (MOHAMEDSAID, in press).

Liroetiella antennata MOHAMEDSAID et KIMOTO, n. sp. (Fig. 1)

Yellowish. Body elongate-oblong. Length 4.9–5.1 mm, width 2.1–2.3 mm. Head triangularly-shaped, impunctate; eyes large, the interocular space as wide as the transverse diameter of each oculus. Antennae

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〔Ent. Rev. Japan, Vol. XLVIII, No. 1, pp. 45–46, June, 1993〕

long, nearly as long as the body length, with segments III & IV, strongly dilated; segment I, long, club-shaped; II, very short, as long as broad; III, broadened to apex, trigonate; IV, longer than III, narrowed to apex, subcylindrical; V-XI, as long as IV, filiform, each of them subequal, pubescent. Pronotum transverse, 1.5 times as broad as long; sides almost straight; anterior border unmargined, the lateral and posterior borders margined; disc finely punctured, depressed transversely. Scutellum broadly triangular, impunctate. Elytra broader than prothorax, sides subparallel, convex, rugosely punctured; epipleuron abbreviated behind middle of the elytron. Ventral surface yellowish, moderately densely covered with golden pubescence. Anterior coxal cavity opened posteriorly. Legs yellowish, with tibiae and tarsi blackened; middle and posterior tibiae with a spine; first segment of the posterior tarsus very long, twice as long as tibia, almost four times as long as the tarsal segments combined. Fifth abdominal sternite trilobed, the median lobe subquadrate, slightly with its surface slightly concave, pubescent. Pygidium exposed, pubescent. Female. Antennae filiform, without deformed segments.

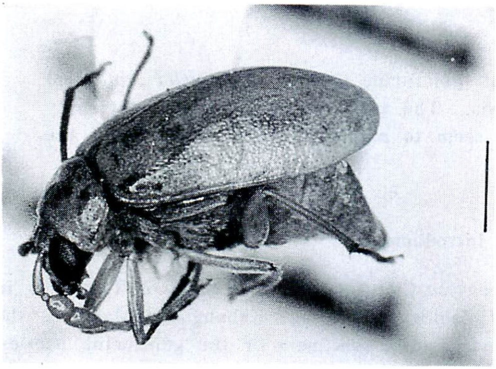

Fig. 1. Habitus of the *Liroetiella antennata* MOHAMEDSAID et KIMOTO, n. sp. (Scale bar = 1 mm.)

Holotype: ♂, Malaysia, Sabah, Lembah Danum, 27-31. viii. 1991, SALLEH, ZAIDI, MAIL & LAN. Paratypes: 2 ♂♂, same data as the holotype, UKM, 1 ♂, KIMOTO; 2 ♂♂, 1 ♀, 3-5. xii. 1991, ZAIDI, IS, LAN & YUS, UKM, 2 ♂♂, KIMOTO; 1 ♂, Papar, Ulu Kimanis, 6. xii. 1991, ZAIDI, IS, LAN & YUS, UKM.

The holotype is deposited in the Insect Collection of the Department of Zoology, Universiti Kebangsaan Malaysia, Bangi (UKM). Three paratype specimens are deposited in KIMOTO's Collection, Kurume University (KIMOTO).

Remarks. The deformed antennal segments III & IV distinguished the species from other known species of *Liroetiella*.

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Study on Asian Carabidae, V
(Coleoptera)
The Species of the Genus *Coleolissus* BATES

By NOBORU ITO[1]

Abstract Three new species of the genus *Coleolissus* from Borneo and one new species from Taiwan are described.

Coleolissus (*Coleolissus*) *ohkurai* sp. nov.

(Text figs. 2-4 & 11, Pl. 6, A)

Body elongate-oval and flattened above, shiny, elytra weakly iridescent, with a purplish blue reflection, mandibles blackish brown, legs dark reddish brown, palpi and antennae reddish brown.

Head moderately convex, relatively narrow in width exclusive of eyes, finely (in some specimens somewhat coarsely) and very sparsely punctate, labrum transversely square and hardly emarginate at apex, clypeus almost flattened, with long and longitudinal rugosities arranged transversely along middle and dulled on central area, clypeal suture fine, more or less deep throughout or becoming shallow in middle, frontal impression from each end of the suture running obliquely toward eye, fairly deep but rapidly shallowed behind and almost rudimental before eye, vertex not flattened and weakly, regularly raised, a supraorbital seta situated at one-fourth before hind level of eye, eyes large and hemispherically exposed because of short tempora, which are not more than one-tenth times the eye's length and steeply narrowed to neck-constriction, genuine ventral margin of eye adjoining buccal fissure, antennae not long and extending only a little beyond pronotal base, mandibles robust and long, clearly curved inward before apex, ligula (Fig. 2) wide, subparallel-sided or fairly expanded apically, bisetose, and shallowly notched at apex, paraglossae prolonged forward beyond ligular apex and adnate to ligula basally from behind the ligular expansion, median tooth of mentum elongate and arcuate at apex, epilobes narrow and weakly widened apically; microsculpture obscure, observed as

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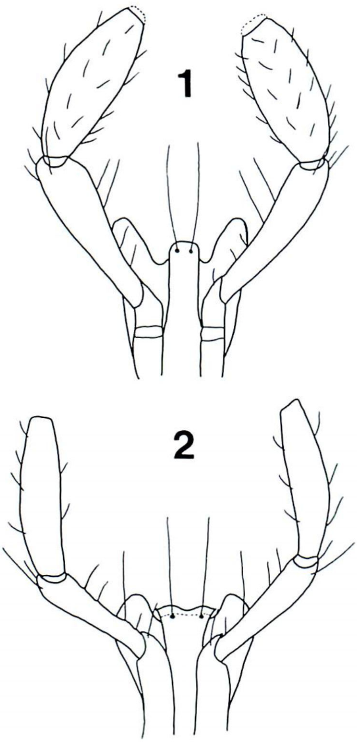
[Ent. Rev. Japan, Vol. XLVIII, No. 1, pp. 47-56, pl. 6, June, 1993]



Figs. 1–2. Ligulae and labial palpi of *Coleolissus* (*Coleolissus*) spp.
1, *C.* (*C.*) *cyanescens* sp. nov.; 2, *C.* (*C.*) *ohkurai* sp. nov.

mixtures with transverse and isodiametric meshes and invisible here and there, but clearly observed as isodiametric meshes on apical half area of clypeus.

Pronotum transversely square, a half wider than long and one and two-fifths times the width of head inclusive of eyes, weakly convex, flat on disc, and weakly reflected on basal area, sides fully curved throughout and a little stronger in curvature forward than backward, apex substraight and clearly bordered even in middle, base also entirely bordered, shallowly bisinuate and briefly oblique at sides, basal angles obtuse, not fully and rather narrowly rounded (those seem to be dully angulate), lateral furrows widened gradually from apex to apical two-fifths, then distinctly behind, and linked with basal foveae, basal foveae shallow and large, extending basal and lateral borders, front transverse impression obscure but not rudimental alike hind one, median line fine, marked in middle and reduced near both apex and base, surface largely smooth except several rugosities fine and vague, somewhat finely, rather densely, and not confluently punctate on basal foveae, the punctures spread over lateral furrows, where those become finer and sparser; microsculpture mostly absent, visible partly on basal foveae and lateral furrows and consisting of transverse lines and meshes.

Fully winged. Elytra oblong, two-fifths wider than pronotum and a little more than one and a half times as long as wide, apparently smooth (observed very sparse and microscopic punctures in 40 magnification), sides widely, obscurely sinuate before middle, weakly widened behind from there, arcuately narrowed toward apex from apical two-fifths, and shallowly sinuate before apex, apex narrow and fairly produced behind, apical teeth sharp and very small, basal border shallowly bisinuate and very gently oblique at sides, humeral angles widely and fully rounded, striae narrow and finely crenulate, intervals almost flat on disc (quite flat in ♀), so striae seem to be shallow, and raised near apex, 3rd interval with a row of 6–9 setiferous pores along 2nd stria, scutellary strioles fairly long, marginal series subinterrupted in middle, composed of (13–15)+(14–16) umbilicate pores; microsculpture invisible or rarely observed as very vague transverse lines.

Ventral surface widely punctate and smooth only on buccal area and 3rd to 6th abdominal segments, prosternum sparsely, obscurely punctate, mesepisterna, metepisterna, metasternum, and lateral areas of 1st and 2nd abdominal segments rather coarsely punctate, metepisterna a half longer than wide, abdomen very sparsely ciliate along middle of 3rd to 6th segments, outer margin of 6th quadrisetose in both sexes, feebly emarginate at apex in ♂, and fairly produced behind and arcuate in ♀.

Fore tibiae slender and weakly widened distally, clearly sulcate lengthwise, many setae (9–10 setae) seriate along the sulcus, terminal spur simple, hind tarsi a little shorter in both sexes than the width of head, 1st joint two-thirds longer than 2nd and subequal in length to 2nd and 3rd together, claw joint trisetose along each ventral margin.

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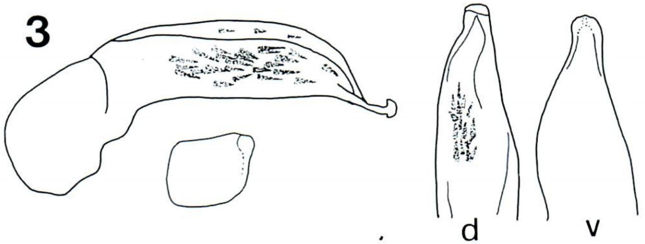

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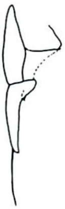

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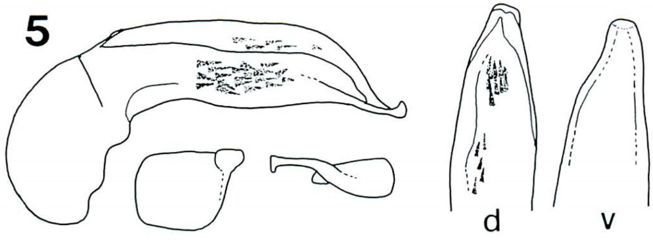


Figs. 3–5. Genitalia of *Coleolissus* (*Coleolissus*) spp.; 3, 5, male; 4, female. 3, 4, *C.* (*C.*) *ohkurai* sp. nov.; 5, *C.* (*C.*) *cyanescens* sp. nov. d: dorsal side, v: ventral side.

Aedeagus (Figs. 3 & 11) robust and widely sinuate at ventral side, steeply constricted before apex, apex hemispherically thickened and obliquely directed, apical orifice occupying mostly on dorsal side and extending just before apex, so apical lamella is fairly small, membraneous part with many wedge-shaped copulatory pieces, basal part large and triangularly protrudent at margin of basal orifice; styluses (Fig. 4) slender and substraightly produced behind, bearing a small spine on each outer margin and a long seta just before apex.

Length: 13.5–14.0 mm. Width: 5.2–5.5 mm.

Holotype: ♂, Keningau, Sabah, Is. Borneo, E. Malaysia, 16. II. 1989, M. Itoh leg. (in T. Shibata's coll.). Paratypes: 1♀, same data as the holotype; 3♀♀, same locality as the holotype, 10–20. X. 1988, M. Itoh leg.; 1♀, same locality as the holotype, 18. II. 1989, M. Itoh leg.; 1♀, Sepilok, Sabah, Is. Borneo, E. Malaysia, 13. V. 1981, M. Yamamoto leg.

The new species resembles *Coleolissus* (*Coleolissus*) *leveri* Emden from Russel Is in Solomon Islands, but it is distinguished from the latter by the body larger in size, without any aeneous reflection, the pronotum fully arcuate instead of not linearly oblique behind, whose punctures are finer and sparser, and the metepisterna shorter.

The specific name is given after Mr. Masafumi Ohkura for his great contributions to the development of the Japan Coleopterological Society and for his kind support to my study.

Coleolissus (*Coleolissus*) *cyanescens* sp. nov.

(Text figs. 1 & 5)

The new species is different from the preceding species in the following points: 1) labial palpi (Fig. 1) and maxillary palpi more tumid; 2) ligula (Fig. 1) distinctly narrower, with apex arcuate and not notched; 3) pronotum narrower and not more than one and a half times as wide as long.

Holotype: ♂, Keningau, Sabah, Is. Borneo, E. Malaysia, 16. II. 1989, M. Itoh leg. (in T. Shibata's coll.).

Coleolissus (*Coleolissus*) *formosanus* sp. nov.

(Text figs. 6, 7, & 12, Pl. 6, B)

Body relatively narrow and subparallel-sided, brownish black, with a weak greenish aeneous tinge on pronotum and on elytra, elytra faintly iridescent, outer margin of labrum, palpi, antennae, tarsi, and lateral margins of pronotum and of elytra reddish brown, tibiae and femora dark reddish brown, mandibles blackish brown.

Head not wide, about two-thirds times the pronotal width, gently convex but almost flattened from vertex to middle of frons, sparsely and minutely punctate, the punctures a little denser than those of *Coleolissus azumai* HABU, apex of labrum shallowly emarginate, clypeus vaguely depressed transversely between both setae on sides and longitudinally rugose only near the setae, clypeal suture fine and obscure, but not interrupted even in middle, frontal impressions divergent behind, moderate in front and gradually decreasing behind in depth, almost reduced in middle, thence vestigial to eyes, eyes large and well convex, but not so prominent as to be hemispherical, tempora very short and seeming to be absent, viewed from above, space between buccal fissure and genuine ventral margin of eye distinctly narrow, antennae extending a little beyond pronotal base, mandibles thick and fairly produced forward, pointed at apices, labial palpi short and slender (comparatively slenderer than in *C. azumai*), 3rd joint as long as 2nd (in *C. azumai*, a little shorter than 2nd), ligula more or less widened in front and gently notched at apex, paraglossae fairly produced forward beyond ligula and rounded at apices, median tooth of mentum fully produced in front and blunt at apex (more or less sharp in some specimens), epilobes narrow and weakly widened apically; microsculpture partly visible, observed as isodiametric meshes on apical area of clypeus and as transverse lines near frontal impressions and supraorbital setae, the lines obscure but clearer than in *C. azumai*.

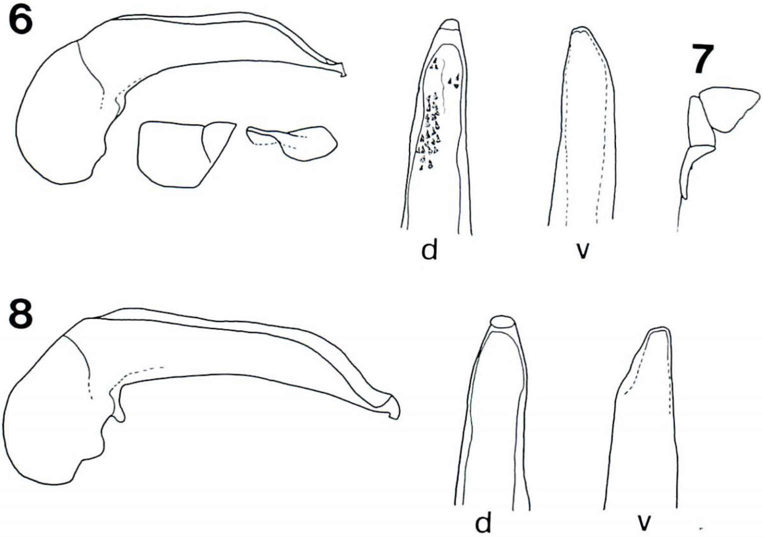
Pronotum transversely oblong, clearly rounded at sides, densely punctate on the most area and rather densely even on central area, the punctures fine centrally and gradually becoming coarser toward all margins, especially coarse and partly confluent on basal foveae, sides widest at apical two-fifths and more strongly arcuate in front than behind from the widest point, apex very shallowly emarginate, base slightly bisinuate and gently short-sloped at sides, both apex and base completely bordered, basal angles wide and quite rounded, basal foveae shallow and ill-defined, from which lateral furrows extend forward and not wide even on basal area, front transverse impression almost vestigial, hind transverse one also indistinct; microsculpture largely absent, partly visible as obscure transverse lines.

Fully winged. Elytra elongate, two-thirds longer than wide, parallel-sided, gently convex and not steeply declivous to sides, sides gradually strongly arcuate behind from apical third and shallowly sinuate before apex, apex narrow and fairly produced behind, tooth of each tip comparatively distinct and elongate-triangular, basal border shallowly bisinuate, humeral angles wide and clearly arcuate, striae fine and shallow, finely crenulate, intervals gently convex even on disc (the convexity weaker in ♀), fairly more convex apically and basally, more or less coarsely and densely punctate, the punctures denser than in *C. azumai*, and coarser and denser laterally and apically, 3rd interval with a row of 8–11 setiferous pores, scutellary strioles fairly long, marginal series subinterrupted medially, composed of 33–36 umbilicate pores; microsculpture mostly absent, partly observed very obscure transverse lines.

Ventral surface coarsely, rather densely punctate on metasternum and mes- and metepisterna and finely, sparsely punctate laterally on 1st to 3rd abdominal segments, metepisterna elongate and two-thirds longer than wide, abdomen bearing very short and sparse ciliae along middle on 2nd to 6th, 6th bisetose on each side of outer margin in both sexes, the margin truncate and not emarginate in ♂ and clearly arcuate in ♀ at apex.

Fore tibiae clearly sulcate on dorsal side, terminal spur simple, fore tarsi not dilated as usual species belonging to genus of subtribe Trichotichnina, hind tarsi slightly longer than the width of head in both sexes, 1st joint two-thirds longer than 2nd and subequal in length to 2nd and 3rd together, claw joint trisetose along each ventral margin.

Aedeagus (Figs. 6 & 12) thick, somewhat twisted to left, with large basal part, apical part thick and rapidly constricted just before apex, apex knob-shaped, relatively thin and oblique to left in lateral view, slightly hooked at under tip, apical orifice occupying largely on dorsal



Figs. 6–8. Genitalia of *Coleolissus* (*Coleolissus*) spp.; 6, 8, male; 7, female. 6, 7, *C.* (*C.*) *formosanus* sp. nov.; 8, *C.* (*C.*) *azumai* HABU.

side, with many conical copulatory pieces on inner sack, apical lamella widely triangular and one-fourth wider than long, fairly arcuate at apex, basal orifice transverse-triangularly protuberant at margin; styluses (Fig. 7) slim and weakly arcuate outward, acute at tips, two long setae situated before apex and a small spine at basal third of each outer margin.

Length: 10.5–11.0 mm. Width: 3.8–4.0 mm.

Holotype: ♂, Is. Lanhsu, Taitung Hsien, Taiwan, 23. IV. 1971, Y. HAYASHI leg. (in T. SHIBATA's coll.). Paratypes: all examples same locality as the holotype, 1♀, 20. IV. 1971, Y. HAYASHI leg., 1♂, 22. IV. 1971, Y. HAYASHI leg., 2♀♀, 23. IV. 1971, Y. HAYASHI leg., 1♀, 5. IV. 1971, S. TAKEDA leg.

The new species is similar to *Coleolissus* (*Coleolissus*) *azumai* HABU (Pl. 6, C), but differs from the latter in having the following characteristics except the points mentioned above: 1) the body smaller in size (12.5 mm in *C. azumai*); 2) the colour lighter and bearing a greenish aeneous tinge; 3) the pronotal punctures denser; 4) the elytral intervals more convex on disc.

I wish to express my hearty thanks to Mr. SUMAO KASAHARA for his kind loan of material, *Coleolissus azumai* HABU.

Coleolissus (*Tenuistilus*) *similis* sp. nov.

(Text figs. 9, 10, & 13, Pl. 6, D)

Body weakly oval, pitchy black, shiny, with a rather clearly iridescent lustre and a weak purplish aeneous reflection on elytra and on pronotum, palpi, antennae, and legs brown or reddish brown.

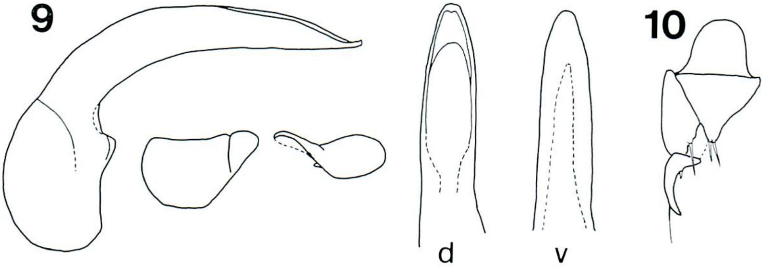
Head rather wide in comparison with *Coleolissus nigricans* N. ITO, a little more than seven-tenths times as wide as pronotum, gently convex, very sparsely and minutely punctate, labrum square and shallowly emarginate at apex, clypeus flattened on front half area and weakly raised transversely on hind half area, obliquely slant at apex, clypeal suture fully deep and not changed in depth throughout, frontal impressions also deep, so that the triangular areas in front of the impressions appear well convex, prolonged obliquely up to eyes and little shallowed even near eyes, eyes large and more or less well convex, tempora weakly swollen and short, one-tenth times as long as eye's length, angulate at junctions with neck-constriction, distance between buccal fissure and genuine ventral margin of eye very short, antennae slender and moderate in length, passing a little pronotal base, 3rd joint weakly dilated distally, a little longer than 4th, and about twice as long as 2nd, mandibles long and rather robust, fairly curved inward and acute at tips, 3rd joints of labial palpi fairly long and one-fifth longer than 2nd, ligula bisetose, weakly widened forward, and subarcuate at apex, paraglossae narrow and parallel-sided in part, where they are free from ligula, narrowly rounded apically, epilobes of mentum slender and weakly narrowed basally, median tooth large and fully produced in front, dull at tip; microsculpture obscure except clear isodiametric meshes on apical half area of clypeus, partly absent on frons and vertex, consisting of transverse meshes and of lines.

Pronotum rather well convex and transversely subquadrate, two-fifths wider than long, mostly smooth as in *C. nigricans* but very sparsely, minutely punctate not only on lateral furrows but also on basal foveae, sides gently arcuate in front and obliquely straight behind from basal three-fifths, fairly reflected basally, apex substraight or weakly emarginate and completely, finely bordered, base hardly bisinuate and gently oblique at sides, apical angles clearly rounded and more or less wide (but narrower than in *C. nigricans*), basal angles obtuse and narrowly rounded, lateral furrows narrow in front and increasing in width behind from middle, where they gradually remove from the sides due to reflection of the sides, basal foveae seeming to be prolongation of lateral furrows, longitudinally oblong and isolated from sides, without any rugosities, front transverse impression shallow and vague but more or less clearer than the hind one, median line fine and clear, marked only between both the impressions; microsculpture mostly absent and rarely observable near lateral furrows and basal foveae as transverse meshes.

Fully winged. Elytra elongate-oblong, flattened on disc, almost parallel at sides, very sparsely and microscopically punctate, sides hardly widened from humeri to apical two-fifths, then roundedly narrowed distally and shallowly sinuate before apex, apex narrow and fairly produced backward, angulate but edentate at sutural angles, humeral angles wide and angularly rounded, striae somewhat wide and moderate in depth, intervals quite flat on disc and moderately convex near humeri and apex, 3rd interval with a row of 5–7 setiferous pores (rarely 4 pores), scutellary strioles fairly long, marginal series subinterrupted in middle, consisting of (8–10)+(11–13) umbilicate pores; microsculpture invisible or barely observed as vague transverse lines.

Ventral surface quite smooth and almost glabrous except very sparse and short ciliae along middle of 3rd to 5th abdominal segments, metepisterna a half longer than wide, 6th segment of abdomen bisetose on each side in both sexes, not emarginate and arcuate at apex even in ♂.

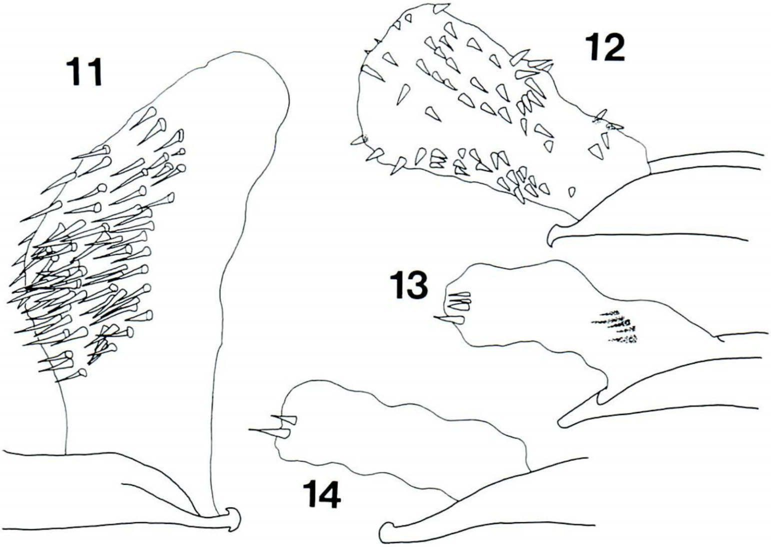
Fore tibiae bearing three spines along apical outer margins and clearly sulcate dorsally, tri- or quadrisetose along the sulcus, 1st joint of mid tarsi biseriately squamous on ventral sides alike 2nd to 4th, hind tarsi hardly longer in ♂ than the width of head and a little shorter in ♀, 1st twice as long as 2nd and a half longer than 3rd and 4th together,



Figs. 9-10. Genitalia of *Coleolissus* (*Tenuistilus*) *similis* sp. nov.; 9, male; 10, female.

5th bisetose along each ventral margin.

Aedeagus (Fig. 9) thin and well gently arcuate, apex weakly, dully reflected above and rounded at tip, apical orifice occupying largely on dorsal side, inner sack (Figs. 13 & 14) bearing four peg-shaped copulatory pieces at apex and five pieces far from apex (in *C. nigricans* two pieces only at apex), ventral side unbordered and well convex longitudinally,



Figs. 11-14. Inner sacks of *Coleolissus* spp.
11, *C.* (*C.*) *ohkurai* sp. nov.; 12, *C.* (*C.*) *formosanus* sp. nov.;
13, *C.* (*T.*) *similis* sp. nov.; 14, *C.* (*T*) *nigricans* N. Ito.

apical lamella elongate-triangular, arcuate and bordered at apical margin, basal orifice weakly sinuate at margin; styluses (Fig. 10) slender and clearly curved, acute at apex, a long seta situated at apical one-sixth on inner margin.

Length: 10.5–11.0 mm. Width: 3.8–4.0 mm.

Holotype: ♂, Keningau, Sabah, Is. Borneo, E. Malaysia, 16. II. 1989, M. ITOH leg. (in T. SHIBATA's coll.). Paratypes: 1♀, same data as the holotype; 1♀, same locality as the holotype, 10–20. X. 1988, M. ITOH leg.; 4♂♂, 3♀♀, Saplut, Sabah, Is. Borneo, E. Malaysia, 8. IV. 1982, M. YAMAMOTO leg.

The new species is very closely allied to *Coleolissus nigricans* N. ITO from the Malay Peninsula, but the body is more elongate and bears a weak purplish reflection on the pronotum and on the elytra instead of the only black body, the pronotum is a little narrower, with the basal foveae not smooth and sparsely punctate, and the elytral intervals on disc are flat and not convex at all.

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HABU, A., 1973: Fauna Japonica, Carabidae: Harpalini (Insecta: Coleoptera): 215–220.

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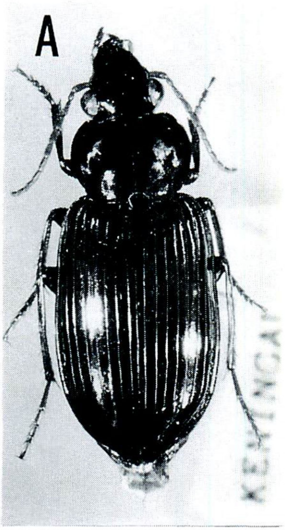
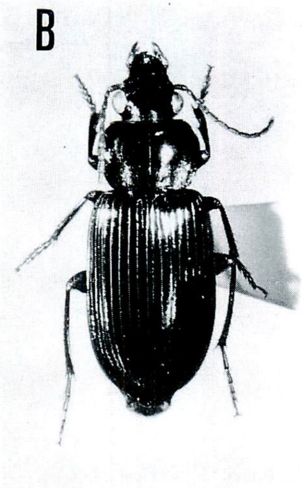
Explanation of Plate 6

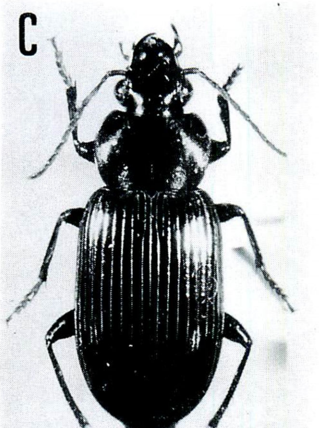
A. *Coleolissus* (*Coleolissus*) *ohkurai* sp. nov.
B. *Coleolissus* (*Coleolissus*) *formosanus* sp. nov.
C. *Coleolissus* (*Coleolissus*) *azumai* HABU.
D. *Coleolissus* (*Tenuistilus*) *similis* sp. nov.

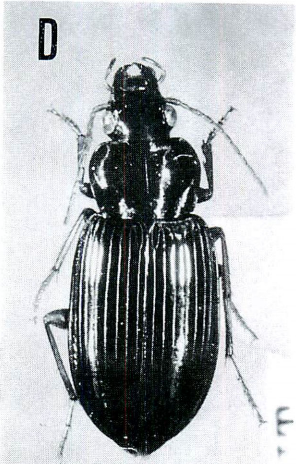
Correction

Coleolissus (*Tenuistilus*) *nigricans* N. ITO (1987, Ent. Rev. Japan, 42 (Suppl.): 27–29). In the original description the ratio of pronotal width to head's one was mistakenly described (p. 27, line 27). It should be amended as "1.6 times as wide as head."









(N. Ito photo.)

Notes on the Taiwanese Buprestidae (IV) (Coleoptera)

Descriptions of Four New Species of the Genus *Coroebus*

By Kôyô Akiyama[1] and Sadahiro Ohmomo[2]

Abstract Four new species of the genus *Coroebus* are described from Taiwan under the names of *Coroebus viridimicans*, *C. torigaii*, *C. elongaticollis* and *C. coelestiofulgens*. *C. linnei* is newly recorded from Taiwan.

This is the third report on the genus *Coroebus* from Taiwan by ourselves and it includes descriptions of four new species of the genus and one species that is newly recorded from Taiwan. The holotypes will be deposited in the National Science Museum (Nat. Hist.), Tokyo.

We wish to express our sincere gratitude to Prof. Dr. Gayle H. Nelson, head of the Department of Anatomy, College of Osteopathic Medicine of the Pacific, Pomona, California for his kindness in critical reading the original manuscript and giving invaluable advices, to Messrs. Chen Wenglong, Liukuei, Taiwan, Shigeru Eda, Tokyo, Takaharu Hattori, Yokohama, Masao Itoh, Yokohama, Tetsuro Mizunuma, Osaka, Tôru Shimomura, Tokyo, and Hyôji Torigai, Takayama, and Drs. Nobuyoshi Ohba, Yokosuka City Museum (Nat. Hist.), Yokosuka, and Zhong Liang Peng, Station of Forest Pest and Disease Controls of Jiangxi Province, Nanchang, China, for their kind loan or gift of materials.

Coroebus viridimicans Akiyama et Ohmomo, sp. nov. (Figs. 1–5)

Male. Body large, long, slender and longitudinally convex; dorsal surface metallic iridescent deep green with purplish tinge; ventral surface metallic iridescent green with cupreous tinge; antennae black with bluish or greenish tinge; legs iridescent green with bluish tinge.

Head broad, convex forward; vertex and frons with very feeble gibbosity on each side of median suture, coarsely punctate and clothed with inconspicuous semirecumbent bicolorous short setae which are silver-white and blackish; eyes oval, inner margin subparallel in frontal

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〔Ent. Rev. Japan, Vol. XLVIII, No. 1, pp. 57–66, June, 1993〕

view ; clypeus about equally as long as wide between antennal cavities, clypeal suture inconspicuous and nearly straight between antennal cavities, transversely finely rugoso-punctate below clypeal suture, with anterior margin feebly arcuately emarginate ; supra-antennal groove deep and arcuate ; antennal cavities obliquely oval, with margins distinctly raised ; antennae long and slender, clothed with long semirecumbent silver whitish setae, especially on inner sides ; 1st antennomere stout and shortest, 2nd and 3rd subglobular, 4th to 11th serrate, and 11th arcuately emarginate at tip, ratio of the length of each antennomere :— 5 : 7 : 6 : 8 : 8 : 8 : 7 : 7 : 8 : 8 : 7 (Fig. 2).

Pronotum transverse, about 1.7 times as wide as long, widest in basal ⅓, lateral margins obliquely expanding in anterior ¼, obliquely straight to posterior ⅓, then obliquely narrowed to base, margin densely and rather uniformly crenulate ; prehumeral carinae clearly distinct, sinuous from base to posterior ⅓ ; anterior margin strongly arcuate ; posterior margin strongly bisinuate, with median lobe broadly produced and subtruncate before scutellum ; disc feebly convex, flattened in middle, feebly depressed on each side in posterior ⅓, lateral area broadly explanate ; surface uniformly punctate. Scutellum large and deltoid, with surface impunctate.

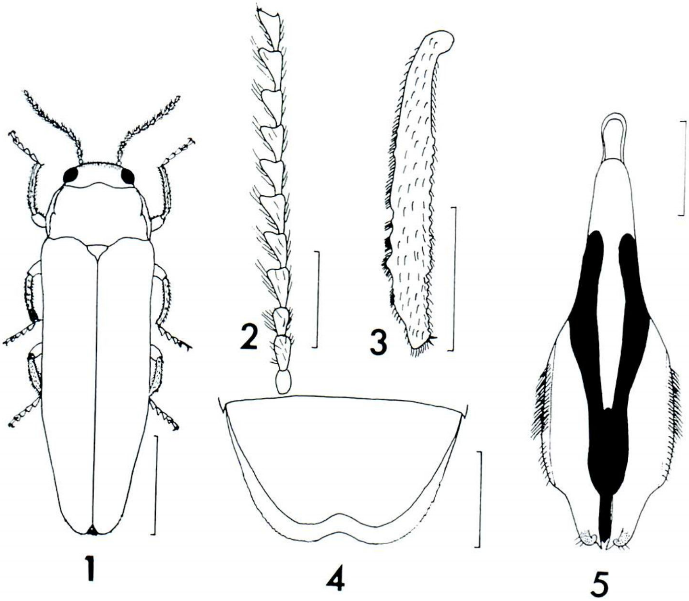
Elytra about 2.6 times as long as wide, about 4.8 times as long as pronotum and widest just past humeri ; sides obtusely rounded at humeri, slightly sinuous to posterior ⅖ where they are broadly and arcuately rounded, then obliquely narrowed to separately rounded apices, basal margin strongly bisinuate ; lateral margins uniformly inconspicuously crenulate and apices dentate-serrate ; disc broadly longitudinally depressed along suture and basally broadly depressed ; surface uniformly punctate, and densely clothed with short inconspicuous semirecumbent golden-yellow setae.

Prosternum coarsely rugoso-punctate along anterior margin that is arcuately emarginate, sides sparsely clothed with inconspicuous long semirecumbent silver-white setae. Prosternal process subconical, almost flattened, and sharply acute at tip, surface uniformly punctate, and coarsely clothed with inconspicuous short suberect silver-white setae ; first visible abdominal sternite longitudinally flattened medially ; surface uniformly punctate, clothed with scattered short semirecumbent silver-white setae ; anal abdominal sternite arcuately emarginate (Fig. 4).

Legs slender, densely clothed with short silver-white setae along inner margins of femora and outer margins of pro- and metatibiae, and densely clothed with light golden-yellow bristle-like setae on inner margins of tibiae and outer margins of metatibiae ; protibiae feebly arcuate ; mesotibiae distinctly arcuate ; metatibiae irregularly dentate-serrate at apical ⅔, irregularly crenulate on outer margin at apical ⅔ (Fig. 3). Tarsi long and slender with ventral pulvilli. Claws double cleft with 4 teeth.

Male genitalia as in Fig. 5.

Length : 13.4 mm ; width : 3.9 mm.



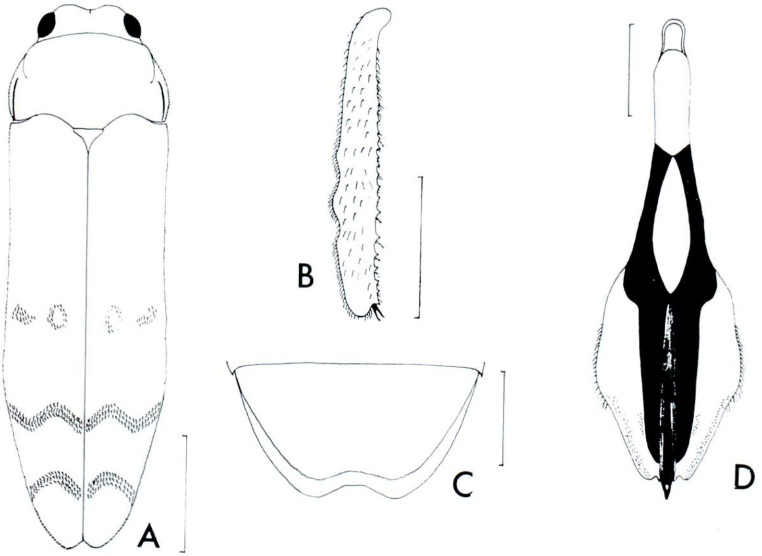
Figs. 1-5. *Coroebus viridimicans* Akiyama et Ohmomo, sp. nov., ♂. 1, Dorsal aspect ; 2, left antenna ; 3, left metatibia ; 4, last visible abdominal sternite ; 5, male genitalia, dorsal view. (Scale bars : 1, 3 mm ; 2-5, 1 mm.)

Female. Differs from male as follows : antennae short, apex of last visible abdominal sternite very feebly arcuately emarginate ; metatibiae not dentate-serrate on inner margins.

Length : 14.0 mm ; width : 4.4 mm.

Holotype : ♂, Choshe, Nantou Hsien, 22. VI. 1980, H. Torigai leg. Allotype : ♀, near Puli, Nantou Hsien, V. 1965, native collector leg. Paratype : 1 ♂, Sungkang, Nantou Hsien, 20. VII. 1983, Luo Chinchi leg.

This new species is in the group of *C. aurofasciatus* (Hope, 1831), and very closely allied to *C. aequalipennis* (Fairmaire, 1888), the latter known from Korea, North and Central China and Far East Russia, but it can be easily distinguished from the latter by the body coloration more strongly iridescent green with deep purplish tinge and the disc of pronotum almost flattened in middle.



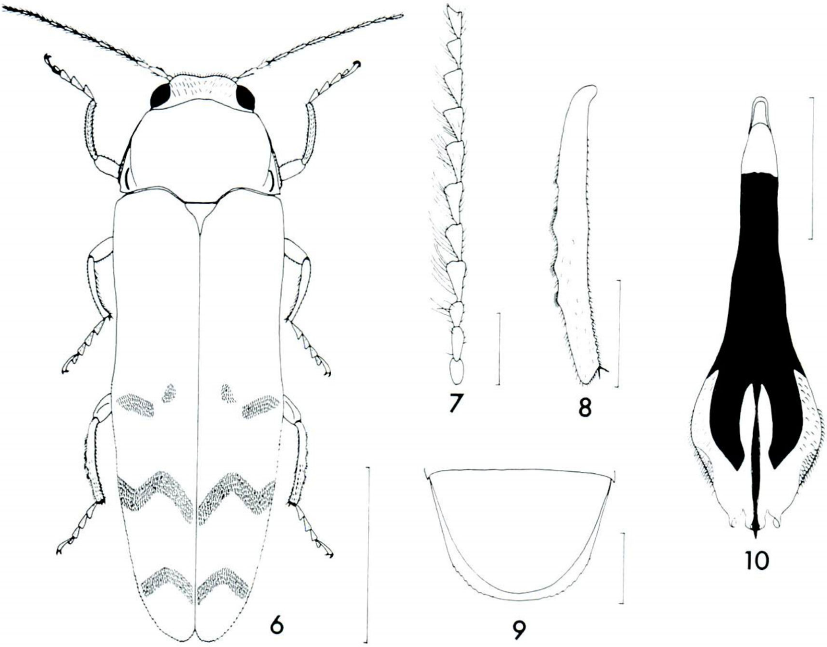
Figs. A–D. *Coroebus aurofasciatus* (Hope).
A, Dorsal aspect ; B, left metatibia ; C, last visible abdominal sternite ; D, male genitalia, dorsal view. (Scale bars : A, 3 mm ; B–D, 1 mm.)

Coroebus torigaii Akiyama et Ohmomo, sp. nov. (Figs. 6–10)

Male. Body very large, elongate and simply deplanate or flattened ; dorsal and ventral surface metallic deep blue with purplish reflection ; antennae and legs black with bluish tinge ; elytra ornamented with four undulate markings of silver-whitish semirecumbent setae arranged on each elytron as follows : irregular spot in middle at basal ½, transverse spot near lateral margin at basal ½, strongly zigzag band at apical ¼ and strongly wavy band just before apex ; lateral portion of each abdominal sternite with a pair of spots of silver-whitish recumbent short setae.

Head transverse, vertex almost flattened ; surface uniformly punctate, coarsely clothed with short inconspicuous setae which are bicolorous golden-whitish and blackish ; frons with feeble irregular gibbosity in middle, surface strongly punctate, coarsely clothed with inconspicuous short setae which are bicolorous golden-whitish and blackish ; eyes oval, subparallel with each other in frontal view ; clypeus about 1.5 times as long as wide between antennal cavities, transversely ruguloso-punctate along U-shaped clypeal suture ; supra-antennal groove deeply and strongly arcuate ; antennal cavities obliquely oval, with margins distinctly raised ; antennae very long and slender, clothed with long semirecumbent silver-whitish setae, especially on inner sides ; 1st antennomere stout and shortest, 2nd and 3rd subglobular, 4th to 11th serrate, and 11th arcuately emarginate at tip, ratio of the length of each antennomere :— 7 : 9 : 7 : 11 : 11 : 11 : 11 : 10 : 10 : 9 : 9.

Pronotum about 2.0 times as wide as long, widest just before base ; lateral margins moderately arcuate, then arcuately emarginate near base, margin uniformly but feebly crenulate ; prehumeral carinae short but distinct and arcuate from near base to basal ¼ ; anterior margin strongly arcuate ; posterior margin strongly bisinuate, with median lobe broadly produced and subtruncate before scutellum ; disc feebly convex, almost flattened in middle, lateral area broadly explanate ; surface uniformly punctate, coarsely clothed with inconspicuous short semirecumbent silver-whitish setae. Scutellum large and subtriangular,



Figs. 6-10. *Coroebus torigaii* Akiyama et Ohmomo, sp. nov., ♂. 6, Dorsal aspect ; 7, left antenna ; 8, left metatibia ; 9, last visible abdominal sternite ; 10, male genitalia, dorsal view. (Scale bars : 6, 5 mm ; 7-9, 1 mm ; 10, 2 mm.)

impunctate.

Elytra about 2.6 times as long as wide, about 5.4 times as long as pronotum and widest just before ½; sides obtusely rounded at humeri, slightly sinuous to just before middle, where they are broadly and arcuately rounded, then obliquely narrowed to separately rounded apices; basal margin strongly bisinuate; lateral margin uniformly inconspicuously crenulate and apices serrate; disc broadly longitudinally flattened, basal depression broad; surface uniformly imbricate rugoso-punctate, densely clothed with short inconspicuous semirecumbent setae which are bicolorous golden-yellow and silver-white.

Prosternum coarsely clothed with semirecumbent golden-whitish setae, with anterior margin arcuately emarginate and deeply grooved. Prosternal process subconical, almost flattened except on each side of apical ⅓, lateral margins with distinct large depression, apex sharply pointed, surface coarsely punctate and clothed with scattered inconspicuous semirecumbent silver-whitish setae. Abdominal surface uniformly punctate and with scattered semirecumbent silver setae, first visible abdominal sternite longitudinally flattened medially, anal abdominal sternite arcuate, weakly so medially with serrations postero-laterally (Fig. 9).

Legs long and slender, densely clothed with short silver-whitish setae along inner margins of femora, inner and outer margins of tibiae densely clothed with light golden-yellow bristle-like setae; protibiae feebly arcuate; mesotibiae distinctly arcuate; metatibiae irregularly serrate on inner margins at apical ⅓, irregularly crenulate on outer margins from basal ¼ to apical ¼. Tarsi long and slender with ventral pulvilli. Claws double cleft with 4 teeth.

Female. Unknown.

Length: 15.7-18.0 mm; width: 4.7-5.3 mm.

Holotype: ♂, Sunkang (2,100 m in alt.), Nantou Hsien, 17. VII. 1983, LUO CHINCHI leg. Paratypes: 1♂, same locality and collector as holotype except date, 8. VII. 1981; 1♂, Choshe, Nantou Hsien, 22. VI. 1980, H. TORIGAI leg.; 1♂, Sungkang, Nantou Hsien, 14. VII. 1982, LUO CHINCHI leg.; 1♂, ditto, 24. VII. 1983, LUO CHINCHI leg.

This new species is closely allied to *C. aurofasciatus* (HOPE, 1831), known from Sikkim, East India, Nepal and Southwest China, but can be easily distinguished from the latter by the body coloration metallic dark green with cupreous tinge, prehumeral carinae feebly arcuate from base to basal ½, apex of last visible abdominal sternite strongly, arcuately emarginate, metatibiae regularly serrate from base to apex, and shape of the male genitalia.

This new species is dedicated to Mr. HYÔJI TORIGAI, Takayama City, who gave us some valuable specimens of Taiwanese Buprestidae.

Coroebus elongaticollis AKIYAMA et OHMOMO, sp. nov. (Figs. 12a-b, 15, 18)

Coraebus quadrispinosus: KUROSAWA, 1953, Bull. natn. Sci. Mus., Tokyo, 33:106.
Coraebus quadrispinosus: AKIYAMA, 1977, Coleopterists' News, (37):6.

In 1953, Y. KUROSAWA was first to record this species from Taiwan under the name of *C. quadrispinosus* FAIRMAIRE, 1891. Recently, we examined true specimens of *C. quadrispinosus* FAIRMAIRE, 1891, from Hunan and Jinangxi Prov., China. After careful study, it was determined that it was an undescribed species. This new species is very closely allied to *C. quadrispinosus*, but differs from it in the following characteristics: 1) ventral surface of elytra metallic blue, with elytral suture golden greenish tinge, while in *C. quadrispinosus*, it is dark purple, elytral suture and lateral margins with bluish tinge; 2) head large and broad while in *C. quadrispinosus*, it is small and narrrow; 3) pronotum with anterior margin moderately arcuate, lateral margins strongly arcuate, while in *C. quadrispinosus*, the anterior margin is strongly arcuate and lateral margins almost straight in posterior ⅔, then arcuately convergent to anterior margin (Figs. 11a, 12a); 4) elytral apices strongly arcuately emarginate and armed with two equal long acute spines, while in *C. quadrispinosus*, they are moderately arcuately emarginate and armed with two moderately acute spines, inner spines especially long (Figs. 11b, 12b); 5) elytra ornamented with undulate markings of semirecumbent silver-whitish setae arranged on each elytron as follows: a coarsely and small concentration of setae at lateral to scutellar area and at middle near suture, a strongly zigzag band at apical ⅗ and strongly wavy band just before apex, while in *C. quadrispinosus*, it is a longitudinal spot in lateral to scutellar area from base to basal ⅕, and a small spot at basal ¼ near suture, a circular spot at ⅖ in middle, a zigzag band at apical ⅓ and feebly wavy band just before apex (Figs. 11b, 12b); 6) outer margins of metatibiae slightly obliquely straight at ½, then obliquely convergent and almost straight to apices, while in *C. quadrispinosus*, they are slightly obliquely straight to apical ⅓, then obliquely convergent and almost straight to apices (Figs. 14, 15); 7) male genitalia long and slender, about 5.3 times as long as wide and widest at apical ⅑, lateral margins of parameres slightly arcuately emarginate at basal 7/9, while in *C. quadrispinosus*, it is about 3.8 times as long as wide and widest at apical ⅐, lateral margins of parameres obliquely and almost straight at basal ⅔ (Figs. 17, 18).

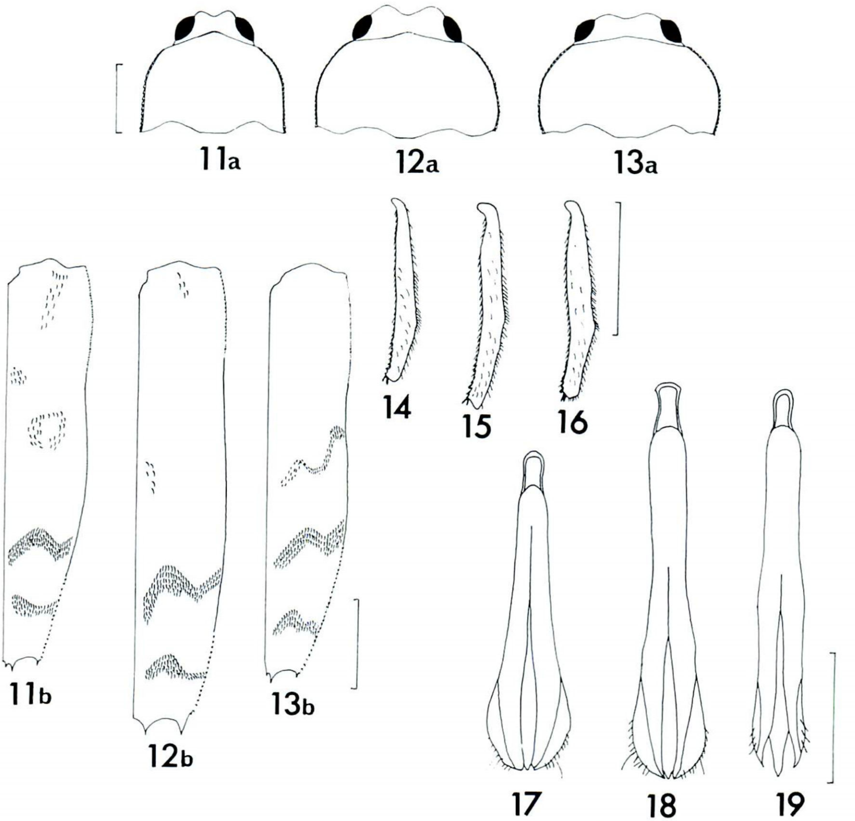
Length: ♂, 7.7-9.5 mm, ♀, 10.9 mm; width: ♂, 2.2-2.9 mm, ♀, 3.4 mm.

Holotype: ♂, Fenchihu (1,000 m in alt.), Chiayi Hsien, 24. V. 1975, K. AKIYAMA leg. Allotype: ♀, Nanshanchi (800 m in alt.), Nantou Hsien, 28. VI. 1973, T. MIZUNUMA leg. Paratypes: 1 ♂, Meifeng (2,100 m in alt.), Nantou Hsien, 20. V. 1976, K. AKIYAMA leg.; 1 ♂, Tsuifeng (2,000 m in alt.), Nantou Hsien, 1. V. 1981, N. OHBA leg.; 1 ♂, Pilu-Shenmu (2,000-2,200 m in alt.), Hualien Hsien, 13. VI. 1982, T. SHIMOMURA leg.

Coroebus coelestiofulgens AKIYAMA et OHMOMO, sp. nov. (Figs. 13a-b, 16, 19)

Very similar to *C. elongaticollis* sp. nov., but differs from it in the following characteristics: 1) vertex with feeble gibbosity on each side of median groove, while in *C. elongaticollis*, it has strong gibbosity on each side of median groove (Figs. 12a, 13a); 2) anterior margin of pronotum feebly arcuate, while in *C. elongaticollis*, it is moderately arcuate (Figs. 12a, 13a); 3) elytra about 2.5 times as long as wide, about 4.5 times as long as pronotum, while in *C. elongaticollis*, it is about 2.8 times as long as wide, about 5.0 times as long as pronotum; 4) elytral apices moderately arcuately emarginate and armed with two moderate acute spines with inner spine especially long, while in *C. elongaticollis*, they are strongly arcuately emarginate and armed with two equally long acute spines (Figs. 12b, 13b); 5) elytra ornamented with silver-whitish semi-recumbent setae arranged on each elytron as follows: irregular and strongly wavy band at ½, zigzag band at apical ⅓ and strongly wavy band just before apex, while in *C. elongaticollis*, there are coarse and small concentrations of setae at lateral to scutellar area and at ½ near suture, strongly zigzag band at apical ⅗ and strongly wavy band just before apex (Figs. 12b, 13b); 6) outer margins of metatibiae slightly obliquely straight to apical ⅓, then obliquely convergent and almost straight to apices, while in *C. elongaticollis*, it is slightly obliquely straight to ½, then obliquely convergent and almost straight to apices (Figs. 15, 16); 7) male genitalia about 7.1 times as long as wide and widest at apical ⅒, lateral margins of parameres slightly arcuate at apical ¼, while in *C. elongaticollis*, it is about 5.3 times as long as wide and widest at apical ⅑, lateral margins of parameres strongly arcuate at apical 2/9 (Figs. 18, 19).

This new species is also allied to *C. quadrispinosus*, but can be distinguished from it by the following characteristics: 1) head large and broad with feeble gibbosity on each side of median groove on vertex, while in *C. quadrispinosus*, it is small and narrow with strong gibbosity on each side of median groove on vertex (Figs. 11a, 13a); 2) anterior margin of pronotum feebly arcuate, while in *C. quadrispinosus*, it is strongly arcuate (Figs. 11a, 13a); 3) elytra metallic blue with elytral suture golden greenish tinge, while in *C. quadrispinosus*, it is purple with elytral suture and lateral margins bluish tinge; 4) lateral margins of pronotum strongly arcuate, while in *C. quadrispinosus*, they are almost straight in posterior ⅔, then arcuately convergent to anterior margin (Figs. 11a, 13a); 5) elytra ornamented with undulate markings of silver-whitish semirecumbent setae arranged on each elytron as follows: irregular and strongly wavy band at ½, strongly zigzag band at apical ⅓ and strongly wavy band just before apex, while in *C. quadrispinosus*, it is longitudinal spot at lateral to scutellar area from base to basal ⅕ and small spot at basal ¼ near suture, circular spot at ⅖ in middle, strongly zigzag band at apical ⅓ and feebly wavy band just before



Figs. 11–19. 11a, 11b, 14, 17, *Coroebus quadrispinosus* Fairmaire, ♂; 12a, 12b, 15, 18, *Coroebus elongaticollis* Akiyama et Ohmomo, sp. nov., ♂; 13a, 13b, 16, 19, *Coroebus coelestiofulgens* Akiyama et Ohmomo, sp. nov., ♂.

11a–13a, Heads and pronota; 11b–13b, left elytra; 14–16, left metatibiae; 17–19, male genitalia, dorsal view. (Scale bars: 1 mm.)

apex (Figs. 11b, 13b); 6) male genitalia about 7.1 times as long as wide and widest at apical 1/10, lateral margins of parameres slightly arcuate at apical 1/4, while in *C. quadrispinosus*, it is about 3.8 times as long as wide and widest at apical 1/7, lateral margins of parameres strongly arcuate at apical 1/3 (Figs. 17, 19).

Length: ♂, 8.3 mm, ♀, 9.0 mm; width: ♂, 2.6 mm, ♀, 3.0 mm.

Holotype: ♂, Mt. Pengganshan, Liukuei, Kaohsiung Hsien, 29. III. 1989, CHEN WENGLONG leg. Allotype: ♀, same data as holotype.

Coroebus linnei OBENBERGER

Coraebus linnei OBENBERGER, 1922, Arch. f. Naturg, 88, A(12): 135-136.

Specimen examined: ♀, Nanshanchi (800 m in alt.), Nantou Hsien, 1. VI. 1979, M. ITOH leg. (in coll. NSMT).

This species was described from Hong Kong. Recently, we examined 4 specimens from Jiangxi and Sigan Prov., China, to which the above was compared, and they were found to be the same species, so it was newly recorded from Taiwan.

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A New *Melanotus* from Is. Ishigaki-jima (Coleoptera, Elateridae)

Some New Forms of Elateridae in Japan (XXIII)

By TAKASHI KISHII[1] and GIUSEPPE PLATIA[2]

We would like to describe a new Melanotine species from Is. Ishigaki-jima, the southernmost in Nansei Archipelago, Okinawa Prefecture, Japan.

In October of 1992, KISHII, one of the authors received a lot of Melanotine-species from PLATIA, another of the authors, and was asked an opinion on the determination, and after our brief discussion, on a *Melanotus*-species from Is. Ishigakijima containing within the lot, we entirely agreed upon that the species was undoubtedly new to science.

PLATIA's material used in this report is the collection of the Bishop Museum in Hawaii of USA collected by Mr. & Mrs. L. & M. GRESSITT, the famous cerambycist.

We wish to express our sincere gratitude to Dr. G. A. SAMUELSON of the Bishop Museum for giving us a chance to examine the valuable example, which is deposited in the collection.

Melanotus (*Melanotus*) *brevithorax* KISHII et PLATIA, sp. nov.

(Pl. 7, Figs. 1-8)

Female, 18.75×5.10 mm. Robust, rather broad, elongate ellipse, a little depressed above medio-longitudinally, parallel-sided from middle of pronotum to before middle of elytra, then gently and roundly convergent anteriorly as well as posteriorly, and subopaque all over. Dark reddish brown entirely, with antennae, hind corners of pronotum, basal margins of elytra including scutellum narrowly, ventral surface and legs more or less paler. Pubescence rather erect, dense, not so long, rather thick and fulvous wholly.

Head narrowest near middle, widest at anterior corners, subquadrate, a little convex above medianly, feebly declivous antero-inferiorly; relative breadth across eyes (narrowest breadth) and each eye width at dorsal views as 80 : 33 (ca. 2.4 times); punctures clearly large, circular, umbilical

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and conspicuously dense, but more or less uneven in density and size, and generally reticulated mutually; frons (fig. 7) narrowly flattened transversely along fore margin, which is well-defined and carinated, distinctly developed laterally before eyes, and sublinearly transverse at most parts of middle with a weak median emargination; frontal groove broad, plainly deep, obviously developed ahead eaves-likely at anterior border of frons, with exceedingly minute shagreen-like sculptures in high magnification.

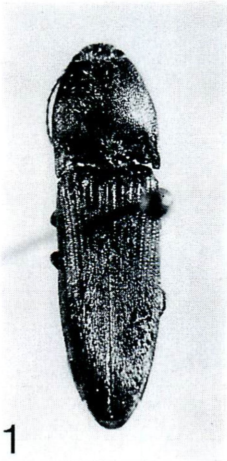
Antennae visibly shorter than combined length of head and pronotum together, and hardly reaching to base of each hind angles of pronotum; relative lengths and widths from basal joint to 5th as 40/15, 14/12, 27/14, 30/19 and 28/18 respectively (length/width) (fig. 6); basal joint robust and clearly arcuate, 2nd subglobular, 3rd elongate triangular, 4th to 10th moderately serrate, and 11th elongate subrhombic and a littlelonger than 10th.

Pronotum large and broad, moderately and simply convex above, without any median line nor furrow, parallel-sided at posterior half, then gently roundly convergent anteriorly; relative median length and width as 88 : 100; punctures plainly smaller and a little sparser than those on head vertex, rather single at summit, but becoming progressively larger, denser and umbilicate laterally, and smaller posteriorly, with interpunctate space glabrous obviously at middle, but perfectly obsolescent and reticulated mutually on lateral borders; hind angles (fig. 4) parallel-sided each other, thick, rather short and broad, with each apex subpointed, having distinct well-carinated unicarination projecting from apex to beyond base of angle; basal furrows divergently extending ahead, rather large and distinctly notched at base.

Scutellum (fig. 5) shield-shaped, feebly narrowed before middle and slightly broadened laterally behind middle, weakly depressed medianly, and a little declivous antero-inferiorly; fore edge transverse, with minute transverse creases on marginal border; hind end rounded; relative median length and widest breadth as 44 : 36; punctures obscure, shallowly punctate, not so sparse, and uneven in density and size.

Elytra parallel at basal half, then progressively roundly convergent posteriorly, and flattened medianly; humeral corners exceedingly carinated longitudinally and briefly, and a little broadened at angles; striae fine, narrowly furrowed, with single, not so large, rather close mutually, and deep punctures; strial interstices flattened entirely, generally glabrous, with fine, sparse and even punctures; sutural and elytral ends moderate.

Prosternum narrow, elongately quadrate, subparallel-sided, feebly narrowed medianly, clearly convex down medio-longitudinally exclusive



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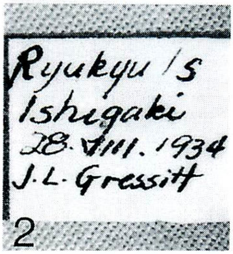

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Ishigaki
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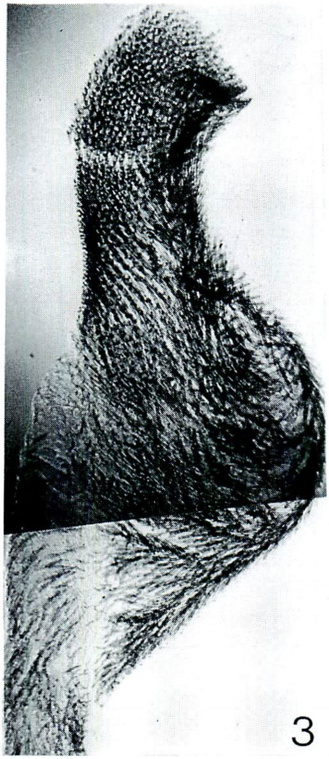

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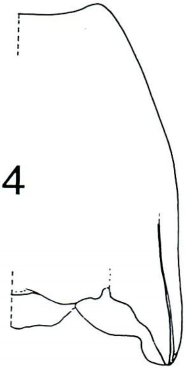

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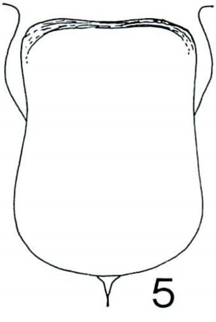

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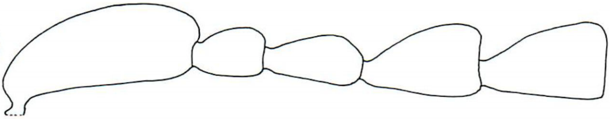

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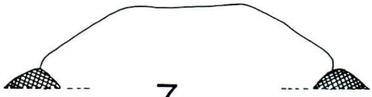

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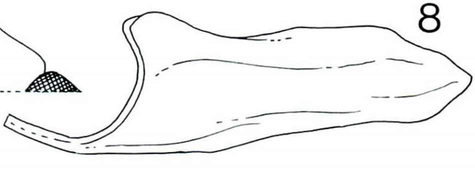

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(T. Kishii photo. & del.)

for anterior part, with punctures more or less similar to those on pronotum, but a little smaller and sparser; anterior lobe narrow, subcrescently developed antero-inferiorly, with frontal edge clearly carinate thickly. Prosterno-pleural sutures broad, double-likely marginated at pleural edges, smooth wholly, with anterior ends shallowly broadly canaliculated. Prosternal process in profile (fig. 8) weakly bent inwards behind procoxal cavities, then linearly extending back, not so thick, with posterior apex simply, obtusely pointed triangularly. Propleural punctures single, longitudinally ellipse, distinctly smaller and sparser than prosternal ones. Mesosternal cavity elongately rhombic and declining postero-inferiorly at rear half. Metasternal punctures more or less similar to propleural ones, but a trifle denser and smaller. Legs moderate. Chitinous structures on bursa copulatrix as figured (fig. 3).

Male unknown.

Holotype, ♀, Ishigaki Is. in Ryukyu, Aug. 28, 1934, J. L. GRESSITT leg. (fig. 2).

Remarks. The outline of the sclerotic structures on bursa copulatrix in the present new *Melanotus* resembles closely that of *M. yagii* KISHII, 1990, from Taiwan, though can be distinguished by the general form and length at terminal part, namely, outline in the bird-head-like part in this new species is evidently elongate. More, the body is plainly larger and broader, coloration is wholly brownish red, pubescence is slenderer, and punctures of head and pronotum are larger, denser and obviously umbilical.

Explanation of Plate 7

Pl. 7, fig. 1. *Melanotus* (*Melanotus*) *brevithorax* KISHII et PLATIA, sp. nov.
Holotype, ♀, Is. Ishigaki-jima in Iss. Sakishima-shotô, 18.75 mm.
2. Label attached to the holotype specimen.
3. Sclerotic formation on bursa copulatrix of female genital organ.
4. Right side of pronotum in dorsal view.
5. Scutellum.
6. Right antenna, basal joint to 5th.
7. Frontal margin of head.
8. Prosternal process in profile.

ジョージ・ルイス顕彰事業報告

日本の甲虫に関心を持つ人々が各科の種類の学名を知った時に，まず気づくのはルイスの命名した甲虫が多くの科にわたり400余種，さらにルイスを記念する種名が140種を超えることに驚くに違いない．野村・藤野両氏が本誌第47巻第1号で述べられているように，この英国人ジョージ・ルイスは幕末・明治初年に茶の商会の代表者として日本に前後2回渡来し，四国を除く各地で多数の甲虫類を採集し，欧州の多くの専門家にその研究を依頼した結果，それまで殆んど断片的にしか知られていなかった日本の甲虫が，初めてまとまって科学的に世界に公知されるようになった我国甲虫学の大恩人である．

しかるにこの大恩人ルイスの生涯については殆んど明らかでないため，会員藤野直也氏は少しでもそれを解明したいと発意されたが，我国に存在する資料は少なく，丁度同じ考えを持っていた会員野村全氏と相い知るに至り，協力して事に当ることになった．この上は，英本国のしかるべき筋に依頼して教示を受ける他はあるまいと，大胆にも大英博物館に手紙を出して援助を乞われた結果，幸い同館の昆虫学図書室副室長 PAMELA GILBERT 女史の絶大な好意を得ることが出来た．

しかし英本国でも事情は同様で，公表されたものは極度に少なく，ギルバート女史の努力により従来全く知られていなかったルイスの肖像写真が唯1葉発見され，その拡大写真が送られて来た．これが藤野氏にルイスの銅像をしかるべき場所に建設したいという熱意を引き起したが，その実現には莫大な経費を必要とすることが判明したので，計画を縮少しレリーフを作製することに変った．

レリーフの作製は藤野氏自身が当ったが，その実現のため両氏が当会会長大倉氏に協力を要請された．早速在阪幹事会が召集され協議の結果，この申入れが承認されるとともに，発起人の選定・趣意書及び予算書・レリーフの寄贈先等々が検討された．かくして，当会会員及び甲虫愛好者に御賛同いただきたい旨の趣意書を発送したところ，ルイスの我国甲虫学への偉大な貢献について甲虫研究者諸氏の反応は著しく，発起人を除く一般賛同者は当初50名前後と予想していたのに，その2倍以上の111名の方々から御賛同をいただいたことは，本事業に対する御理解の賜ものと深く感謝する次第である．

なお，御賛同いただいた諸賢にはルイスの額入り肖像写真並びにルイス編纂“日本産甲虫目録(1879年刊)” をお礼としてお送りした．また，作製したレリーフは三田市に新しく開館した“兵庫県立人と自然の博物館”へ10月10日発起人有志が集まり，大英博物館から贈られた100余年以前に我国でルイス自身が採集した甲虫標本とともに，同博物館に寄贈した．

なおまた，ギルバート女史は我々の招待に応じ10月7日英国航空で来阪，9日に“兵庫県立人と自然の博物館”開館式典に参加，10日夕刻から宝塚ホテルで開催された当会主催の発起人有志による歓迎晩餐会に出席され，14日夕伊丹から英国航空でロンドンへ帰国された．

以上，今回のジョージ・ルイス顕彰事業の概要を御報告申しあげます．（林　匡夫）

Studies on Staphylinidae from Japan, IV

By YASUHIKO HAYASHI

Notes on *Philonthus prolatus* SHARP and its allies

Through the examination of *Philonthus prolatus* and its allied species, I came to the conclusion that they consisted of a unique species-group in very large genus *Philonthus* CURTIS. In this paper I wish to redescribe *Philonthus prolatus* SHARP and *Philonthus spadiceus* SHARP, to describe some new allied species from Japan and the adjacent regions, and to give the definition of *prolatus*-group.

Philonthus prolatus SHARP (Figs. 1–13)

Philonthus prolatus SHARP, 1874, Trans. ent. Soc. London, 1874 : 46 (type locality : Nagasaki) ; BERNHAUER et SCHUBERT, 1914, Coleopt. Cat., 57 : 351 ; SMETANA, 1984, Pan-Pac. Ent., 60 (2) : 122.

Philonthus (*Gabrius*) *prolatus* : SCHEERPELTZ, 1933, Coleopt. Cat., 129 : 1356 ; ADACHI, 1957, Jour. Toyo Univ., (11) : 183.

Gabrius prolatus : SHIBATA, 1983, Annual Bull. Nichidai Sanko, 21 : 129.

Male : Body elongate-subfusiform, apparently flattened above and well shining ; black, elytra with a weak brassy lustre, mouth organs reddish brown with last segments of palpi yellowish brown, antennae blackish brown with base of 2nd segment reddish brown and 11th light brown, apex of 7th tergite narrowly light brownish, legs dark brown with all tarsi brown, especially front tarsi paler, yellowish brown ; elytra and abdomen with rather long, dense and recumbent light brown pubescence. Length : 6.5–7.0 mm.

Head (fig. 2) subtrapezoidal, a little

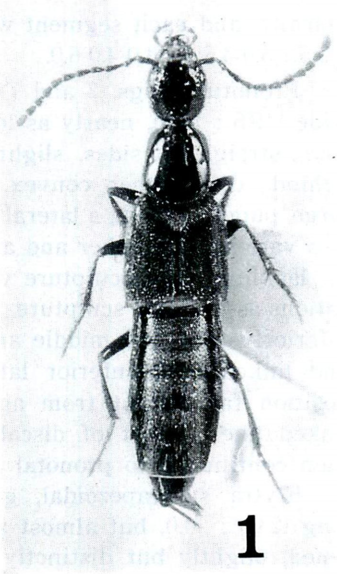
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Fig. 1. *Philonthus prolatus* SHARP ; habitus.

narrowed behind, nearly as long as wide, slightly narrower and considerably shorter than pronotum (14.5 : 15.5 and 14.5 : 19.5), postgenae and hind margin nearly straight, hind angles widely rounded; upper surface gently convex, rather coarsely, and not densely punctured except that frons and vertex widely impunctate (more than two-thirds as wide as minimum width between eyes), with microsculpture very fine, faint and linear. Eyes rather large, gently prominent and a little longer than postgenae (7 : 6). Labrum (fig. 4) deeply and narrowly notched medianly. The 4th segment of maxillary palpi (fig 5) elongate, knife-shaped, subacute at tip, nearly as thick as and quite twice as long as 3rd segment, which is a little shorter than 2nd; galea (fig. 5) with a fine and pale terminal seta. The 3rd segment of labial palpi (fig. 6) long, subfusiform, rather thick, blunt at tip, nearly as thick as and 1.6 times as long as 2nd, which is as long as 1st; mentum (fig. 6) at each front corner bearing an original seta which is well developed, thick and long. Antennae (fig. 3) long, slender, reaching elytral shoulders and feebly thickened distally from 2nd segment; basal 2 segments distinctly polished, 3rd segment weakly so, not ciliate but with abundant, short and stiff pubescence, all segments distinctly longer than wide, 11th segment rice-shaped, 8th to 10th each rather strongly thickened apically, and each segment with the following relative length : 9.0-5.0-6.5-5.0-5.1-5.0-4.5-4.0-4.0-4.0-6.0.

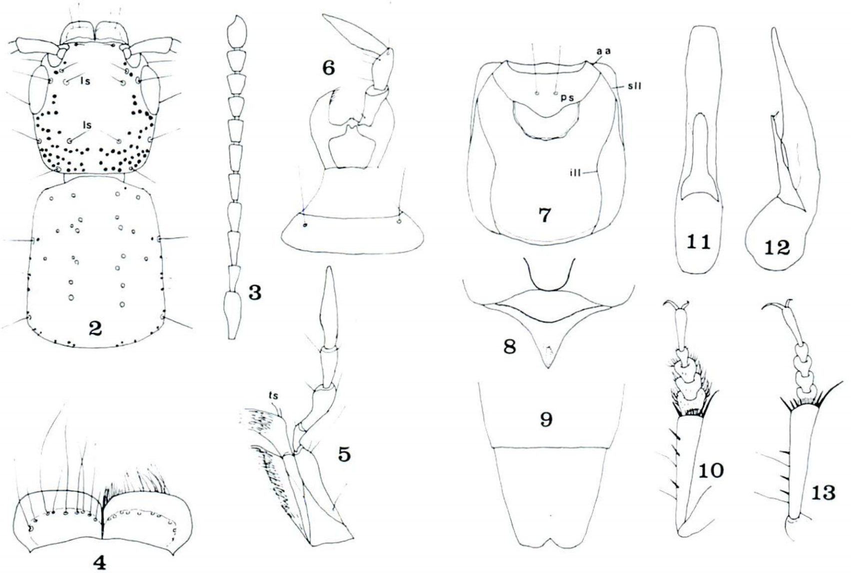
Pronotum (figs. 2 and 7) nearly oblong, considerably longer than wide (19.5 : 15.5), nearly as long as and much narrower than elytra (15.5 : 24.5), straight at sides, slightly narrowed forward and nearly rounded behind; disc rather convex, on each half with a median series of 7 large punctures and a lateral series of 3 ones, the median series more or less various in number and arrangement, sometimes one puncture adding or lacking, microsculpture vestigial, barely perceptible in high magnifications as a linear sculpture; superior lateral line gently incurved antero-inferiorly from the middle and then hidden by front corner of pronotum and linked with inferior lateral line behind apical angle (the linked position far distant from apical angle of pronotal discal margin), the linked line (a part of discal margin of pronotum) extending forward, then continuous to pronotal front margin.

Elytra subtrapezoidal, gently dilated behind, a little wider than long (24.5 : 20.0, but almost as wide as the maximum length), not flattened, slightly but distinctly convex in each half, sides feebly arcuate, apex shallowly emarginate in middle and feebly sinuate laterally, latero-apical angles widely rounded; surface feebly transversely rugose, finely, not densely and slightly asperate-punctate, without microsculpture. Hind wings well developed.

Prosternum (fig. 7) gently convex, lateral borders rather long, entirely united to discal margin of pronotum at the apical angle; surface finely and sparsely pubescent, paired setae strongly reduced, almost imperceptible but barely recognized as paired long and soft hairs. Mesosternum (fig. 8) conspicuously bounded before middle, and its process not sharply ridged.

Abdomen nearly parallel-sided, rather convex above, 3rd to 5th tergites strongly and transversely impressed at each base; each segment at base rather coarsely and densely punctured, finely and sparsely so at apex, the punctures on 7th segment a little smaller and sparser, and those on 8th much smaller and sparser, punctures on sternites a little smaller and sparser than those on tergites; 7th sternite (fig. 9) nearly straight at apex; 8th sternite (fig. 9) with apex shallowly and triangularly depressed and shallowly notched at apical margin.

Procoxae and profemora not spinous and sparsely pubescent; tibiae



Figs. 2-13. *Philonthus prolatus* SHARP.

2, Head and pronotum with chaetotaxy composed of macrosetae and large setae (ls); 3, antenna; 4, labrum (in left half fine setae removed, and in right half large setae removed); 5, maxilla (ts=terminal seta); 6, labium; 7, ventral view of pronotum (aa=apical angle of pronotal discal margin, ps=prosternum, ill=inferior lateral line of pronotum, sll=superior lateral line of pronotum); 8, mesosternum; 9, 7th and 8th sternites; 10, male protibia and protarsus; 11, male genitalia, ventral view; 12, ditto, lateral view; 13, female protibia and protarsus.

sparsely spinous, protibiae (fig. 10) considerably thickened apicad; protarsi (fig. 10) strongly dilated in basal 3 segments and as wide as apex of the tibia.

Male genitalia (figs. 11 and 12) in ventral view elongate and symmetrical; penis in ventral side nearly spatulate, rather large, feebly dilated at apical third, gently arched at apex, projecting as a protuberance at the middle and bluntly edged at sides from the projection toward apex; parameres unilobed, slender, comparatively short, less than half as long as penis (except the base, the shaft less than one-third as long as penis), subcylindrical but somewhat tumid at apical third, rapidly narrowed apically to blunt tip in apical portion.

Female: Eighth sternite weakly arcuate at apex; protarsi (fig. 13) much more weakly dilated in basal segments.

Materials examined: 3♂♂, 2♀♀, Mt. Taradake, Nagasaki, 31. V. 1987, T. Ito leg.; 7 exs., Shiratake, Tsushima Is., 7. VI. 1988, Y. Hayashi leg.; 2 exs., Mt. Yatate, Tsushima Is., 29. IV. 1968, Y. Kiyoyama leg.; 21 exs., Gokei, Okayama, 23. XI. 1978, T. Ito leg.; 2 exs., Muroo, Nara, 3. XI. 1978 and 26. VII. 1981, M. Yasui leg.; 2 exs., Riv. Yoshino, Kamiichi, Nara, 24. IX. 1973 and 17. IX. 1978, M. Yasui leg.; 1 ex., Nachi, Wakayama, 1. V. 1982, Y. Kiyoyama leg.; 1 ex., Riv. Mana, Ohno, Fukui, 1. VIII. 1965, Y. Hayashi leg.; 1 ex., Mt. Sekido, Ishikawa, 10. V. 1964, Y. Hayashi leg.; 1 ex., Riv. Sai, Kanazawa C., 22. VIII. 1961, Y. Hayashi leg.; 1 ex., Mt. Iozen, Ishikawa, 7. VI. 1964, Y. Hayashi leg.; 7 exs., Riv. Tenryu, Ina, Nagano, 15. VII. 1959 and 30. VIII. 1962, Y. Hayashi leg.

Distribution: Japan (Honshu, Kyushu, Tsushima Is.).

In specimens from Tsushima Is. sometimes the pronotum is faintly sericeous and the abdomen very weakly iridescent. Though there are some delicate differences in superficial sculpture and the male genitalia among the specimens from different localities, I could not separate species or subspecies from each other by the differences.

The present species well resembles *Ph. subnitens* Poppius (sense in litt. Coiffait, 1974) from Siberia in general appearance and structure on basal 3 abdominal tergites, but in the latter species the discal series of punctures on the pronotum is composed of five punctures. The present species is rather similar in the male genitalia and discal series of the pronotum to those of *Ph. khnzoriani* Coiffait from Altai and Ussuri, but in *khnzoriani* the basal 3 abdominal tergites are not strongly impressed (judging from redescription of Coiffait, 1974) and the penis is strongly narrowed toward subacute apex. The present species also resembles closely *Ph. leptocerus* Fauvel from Burma and Vietnam (Cochin-China) in the general appearance, the long antennae and punctures on the head, etc., but in the latter species the head is transverse, and the legs are paler, yellowish red.

Philonthus prolatus chonrima ssp. nov. (Figs. 14–15)

Male: The present new subspecies differs from the original subspecies as the followings: punctures on head very sparse, especially several ones on occiput; discal margin of pronotum visible dorsally in the basal third; punctures on elytra and abdomen coarser and much sparser; parameres of male genitalia thicker, short, fusiform, and the shaft nearly one-fourth of the penis; each segment of antennae with somewhat different relative length as followings: 10.0-6.0-7.0-5.0-5.0-5.0-4.5-4.5-4.0-4.0-6.5.

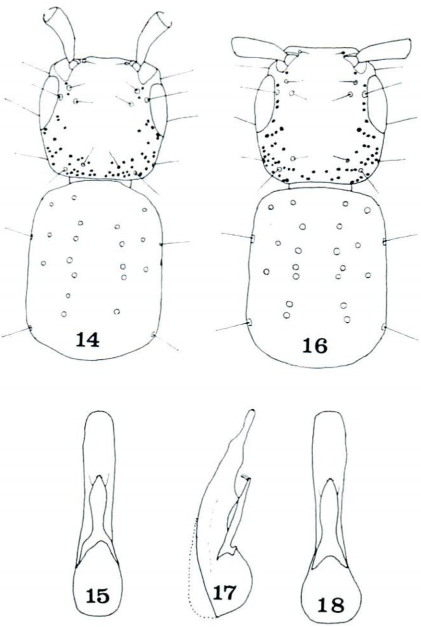
In other respects, the present subspecies is almost equal to the original subspecies. Length: 7.5 mm.

Holotype: ♂, Kwangneung, Korea, 18. VII. 1982, H. KONISHI leg. (in coll. T. SHIBATA).

Distribution: Korea.

Philonthus prolatus ezoensis ssp. nov. (Figs. 16–18)

Male: Body more strongly shiny, pronotum distinctly sericeous, and abdomen distinctly iridescent; pro- and mid-tarsi darker; head rather wide, more widely rounded at basal angles, with punctures sparser; eyes not so large, almost as long as postgenae; antennae more slender, hardly thickened distally, 8th to 10th segments each only a little thickened apically and each segment with slightly different relative length as followings: 10.0-6.0-8.0-5.5-5.5-5.5-5.0-5.0-4.5-4.5-7.0; pronotum more strongly convex, distinctly and more strongly microsculptured, and in dorsal view superior lateral line visible only less than the basal one-third; elytra and abdomen a little more coarsely and sparsely punctured; the male genitalia with parameres widely fusiform, widest at apical third, then arcuately convergent to subacute apex. Length: 7.0 mm.



Figs. 14–18. 14–15, *Philonthus prolatus chonrima* ssp. nov.; 16–18, *Philonthus prolatus ezoensis* ssp. nov.

14, Head and pronotum; 15, male genitalia in ventral view; 16, head and pronotum; 17, male genitalia, lateral view; 18, ditto, ventral view.

Holotype: ♂, Yoneoka, Okushiri Is., Hokkaido, 7. V. 1986, Y. KUSUI leg. (in coll. T. SHIBATA).

Distribution: Japan (Hokkaido: Okushiri-to Is.).

Remarks: In the holotype the last 2 segments of the palpi are markedly flattened, but it is not clear whether this structure is normal or not.

On the features of *prolatus*-group (Figs. 1-13)

Though the genus *Philonthus* has been divided into many groups, according to my observation, *Ph. prolatus* and its allies are characterized for the present as a unique group by the following main triad, with some secondary characteristics:— 1) basal 3 visible tergites of abdomen strongly impressed at each base; 2) 4th segment of maxillary palpi knife-shaped, elongate, almost twice as long as 3rd; 3) penis nearly spatulate, parameres subcylindrical to fusiform, with subacute tip. The following secodary characteristics are recognized generally in this group:— 1) body narrow, elongate, rather flattened above; 2) head numerously and coarsely punctured except on frons and vertex; 3) the 3rd segment of antennae weakly polished, clothed with numerous stiff pubescence; 4) pronotum suboblong, distinctly longer than wide and subparallel-sided, with discal series composed mainly of 7 or 8 large punctures (maybe composed of 5 to 8 punctures); superior lateral line linked with inferior one behind apical angle (the linked position far distant from apical angle of pronotum); 5) original setae of mentum well developed, thick and long; 6) prosternum bearing paired long soft setae which are much mal-developed, barely perceptible as paired long soft hairs, and its lateral borders long and entirely united with discal margin of pronotum at the apical angles; 7) procoxae and profemora not spinous, but protibiae very sparsely spinous; 8) protarsi conspicuously dilated in the male and slightly so in the female.

Philonthus spadiceus SHARP (Figs. 19-22)

Philonthus spadiceus SHARP, 1889, Ann. Mag. nat. Hist., (6) 3: 41 (type localities of the type-series: Kawasaki near Yokohama, Awomori and Sapporo); BERNHAUER et SCHUBERT, 1914, Coleopt. Cat., 57: 356; SMETANA, 1984, Pan-Pac. Ent., 60 (2): 122.

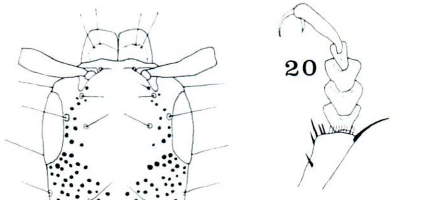
Philonthus (*Gabrius*) *spadiceus*: SCHEERPELTZ, 1933, Coleopt. Cat., 129: 1356; ADACHI, 1957, Jour. Toyo Univ., (11): 183.

Gabrius spadiceus: SHIBATA, 1983, Annual Bull. Nichidai Sanko, 21: 129.

The present species is well similar in general appearance and colouration to *Ph. prolatus* SHARP, but differs from the latter species in the following points: body a little larger, more flattened, especially in elytra, colour more deeply black, elytra without metallic reflection, tarsi darker, coloured as the corresponding tibiae, pubescence rather shorter and a little darker, and each antennal segment with somewhat different relative length. Length: 7.4-9.8 mm.

Male: Head (fig. 19) subquadrate, slightly narrowed behind, gently convex above, as long as wide, very slightly narrower and a little shorter than pronotum (17.5 : 18.0 and 17.5 : 22.0), postgenae and hind margin nearly straight, hind angles widely rounded; upper surface coarsely, rather numerously but not widely punctured except frons and not narrow space of vertex (about two-thirds of the minimum width between eyes), with very fine and weak linear microsculpture. Eyes large, not prominent and slightly longer than postgenae (8.0 : 7.5). Antennae very long and slender, hardly thickened distally, extending fully across shoulders; all the segments much longer than wide, 4th segment slightly but distinctly shorter than 5th, 9th and 10th considerably longer than wide (11 : 7), each segment with the following relative length: 11.0-6.5-9.0-6.0-7.0-7.0-6.0-6.0-5.5-5.5-7.5.

Pronotum (fig. 19) suboblong, considerably longer than wide (22.0 : 18.0), a little shorter and much narrower than elytra (22.0 : 25.0 and 18.0 : 29.0), parallel-sided, straight at sides; front angles widely rounded and hind ones obtusely and widely rounded, base gently arcuate at side and substraight in middle; disc gently convex, very finely and weakly microsculptured as on head, on each half with a median row of 8 large punctures, but the punctures considerably irregular in number and arrangement, the row often adding or lacking 1 or 2 punctures, lateral one of 3 large punctures sometimes irregular and adding some punctures.



Figs. 19-22. *Philonthus spadiceus* SHARP. 19, Head and pronotum; 20, male protarsus; 21, male genitalia, lateral view; 22, ditto, ventral view.

Scutellum finely and not densely asperate-punctured, with distinct linear microsculpture.

Elytra wholly flattened throughout, subtrapezoidal, feebly dilated behind, a little wider than long (29.0 : 25.0, but a little less than the maximum width as 29.0 : 31.0); sides feebly arcuate, apex shallowly emarginate in middle and feebly sinuate laterally, latero-apical angles obtusely angulate, and inner-apical angles rounded; surface somewhat transversely rugose, punctured as on scutellum and without microsculpture.

Abdomen rather convex, transversely and deeply impressed at each base of basal 3 visible segments, punctured as in *Ph. prolatus* but slightly coarser at base than in *prolatus*; apical margin of 7th sternite feebly emarginate; apex of 8th sternite deeply notched at the middle and subtriangularly depressed before the notch.

Protibiae rather long and thick; protarsi (fig. 20) conspicuously dilated in basal 3 segments, the 1st segment nearly as wide as apex of the tibia.

Male genitalia (figs. 21 and 22) elongate and symmetrical; penis in ventral side feebly tumid at base and at apical third, in apical third rather strongly tapered to narrowly rounded tip, bearing a low projection at the middle of ventral side and sharply edged at sides from the projection toward apex; parameres unilobed, cylindrical, subacute at tip and less than half as long as penis.

Female: Protarsi not so dilated, much narrower than apex of tibiae.

Specimens examined: 4 exs., Riv. Shizukuishi, Morioka C., 9. V. 1970, J. KAMEI leg.; 1 ex., Narada, S.-Alps, Yamanashi, 3. IX. 1972, M. YASUI leg.; 8 exs., Riv. Tenryu, Ina, Nagano, 27. VII. 1958 and 30. VIII. 1962, Y. HAYASHI leg.; 1 ex., Takato, Nagano, 22. VIII. 1962, Y. HAYASHI leg.; 1 ex., Riv. Sai, Kanazawa C., 27. VI. 1964, Y. HAYASHI leg.; 1 ex., Ichinose, Ishikawa, 13. VIII. 1978, M. YASUI leg.; 10 exs., Horikane, Ohno, Fukui, 29. VIII. 1965 and 28. VII. 1979, Y. HAYASHI leg.; 3 exs., Mt. Arashima, Ohno, Fukui, 6. VI. 1965, Y. HAYASHI leg.; 1 ex., Mt. Daihi, Kyoto, 6. VI. 1959, T. KAWATSU leg.; 1 ex., Ashu, Kyoto, 27. VI. 1976, Y. KIYOYAMA leg.; 2 exs., Riv. Kizu, Kyoto, 11. VIII. 1980, M. YASUI leg.; 1 ex., Riv. Mino, Osaka, 21. IV. 1960, T. KAWATSU leg.; 1 ex., Riv. Saijo, Nagano, Osaka, 29. VI. 1972, M. YASUI leg.; 7 exs., Riv. Yoshino, Kamiichi, Nara, 27. VIII. and 3. IX. 1972, 3. XI. 1973 and 20. VII. 1980, M. YASUI leg.; 1 ex., Kamihinachi, Nabari, Mie, 1983, M. AMAGASU leg.; 2 exs., Akazai, Hyogo, 17. VI. 1979, T. ITO leg.; 2 exs., Meboro, Tsushima Is., 31. VII. 1980, M. YAMAMOTO leg.; 1 ex., Shiratake, Tsushima Is., 7. VI. 1988, Y. HAYASHI leg.

Distribution: Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima Is.).

The present species is well similar to *Ph. prolatus*, but it is easily distinguished from the latter by the darker colour of tarsi, conspicuously flattened elytra, much longer antennae with 4th segment slightly but distinctly shorter than 5th and penis tapering in the apical portion.

Though the specimens from different localities are delicately different in the male genitalia and the superficial sculpture, the difference is seemed to be continuous, so that it is difficult to separate in species or subspecies from each other by the difference.

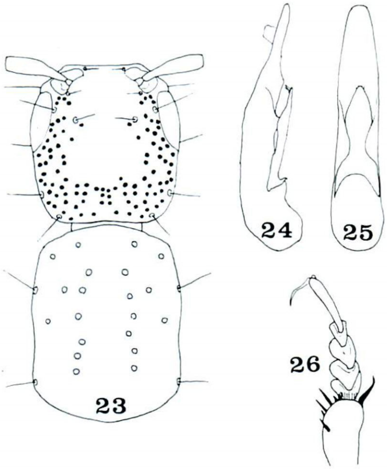
Philonthus amamiensis sp. nov. (Figs. 23–26)

The present species resembles closely in general appearance, colour, manner of punctures on head, ratio of antennal segments and proportion of penis to those of *Ph. spadiceus* except for apical 2 segments of antennae paler, brownish, pronotum weakly sericeous, elytra and abdomen blackish brown with rather short and brownish pubescence. Length: 8.2–8.5 mm.

Male: Head (fig. 23) slightly longer than wide (17.5 : 17.0), slightly wider and a little shorter than pronotum (17.0 : 16.5 and 17.5 : 21.0), hind margin feebly arcuate; upper surface more numerously punctured than in *Ph. spadiceus*, therefore impunctate space on vertex a little narrower than in *spadiceus*, the space about half as wide as the minimum width between eyes; microsculpture linear, fine and very weak. Eyes rather small, a little shorter than postgenae (7.0 : 9.0) and not prominent. Antennae similar in form and proportion to those of *spadiceus*, and each segment with the following relative length: 11.0-7.0-9.0-6.0-7.0-6.5-6.5-6.0-5.5-5.5-8.0.

Pronotum (fig. 23) nearly equal in shape and proportion to *spadiceus* but somewhat narrowed behind, faintly sinuate at sides; disc on each half with median row basically composed of 7 coarse punctures, the punctures rather variable in number as in *spadiceus*, each lateral row also of 3 ones, and microsculpture alike to head.

Scutellum finely and not densely punctured, with distinct linear microsculpture.



Figs. 23–26. *Philonthus amamiensis* sp. nov.
23, Head and pronotum; 24, male genitalia, lateral view; 25, ditto, ventral view; 26, male protarsus.

Elytra distinctly flattened but not wholly so as in *spadiceus*.

Abdomen slightly dilated in middle, each segment punctured as similar manner as in *spadiceus* but the punctures a little coarser and sparser; each apex of 7th and 8th sternites also similarly structured.

Protibiae rather long, considerably thickened apicad; protarsi (fig. 26) in the male considerably dilated in basal 3 segments but distinctly narrower than apex of the tibiae.

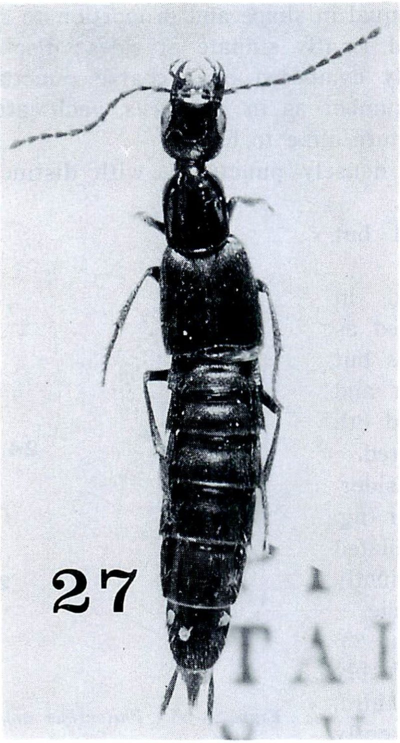
Male genitalia (figs. 24 and 25) symmetrical, slender; penis feebly tumid at base and at apical third, in apical third much more gently narrowed toward widely rounded tip than in *spadiceus*; parameres rather thick, fusiform, blunt at tip, considerably shorter than a half of penis.

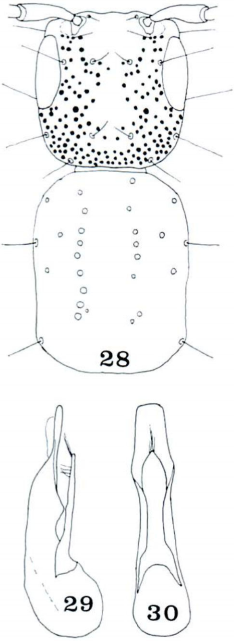
Holotype: ♂, Hatsuno, Amami Ohshima Is., 4. IV. 1966, T. Ito leg. (in coll. T. Shibata). Allotype: ♀ and paratypes: 5♂♂, 1♀, same data as the holotype; 1♂, Inokawa, Tokunoshima Is., 28. III. 1966, H. Nomura leg.

Distribution: Japan (Amami Ohshima Is., Tokunoshima Is.)

Philonthus kiyoyamai sp. nov. (Figs. 27-30)

Head (fig. 28) subparallel-sided, slightly wider and a little shorter than pronotum (18.0 : 17.5 and 18.0 : 22.0); upper surface very numerously punctured except frons and narrow space of vertex (the space about one-third of the minimum width between eyes) and with a faint linear microsculpture. Eyes moderately large, as long as postgenae. Antennae somewhat thickened distally from 3rd segment and with the following





Figs. 27-30. *Philonthus kiyoyamai* sp. nov.

27, Habitus; 28, head and pronotum; 29, male genitalia, lateral view; 30, ditto, ventral view.

relative length: 11.0-6.5-9.0-6.0-6.5-6.5-6.0-6.0-5.5-5.5-8.0.

Pronotum (fig. 28) considerably longer than wide (22.0 : 17.5), a little shorter and much narrower than elytra (22.0 : 25.0 and 17.5 : 28.0) and somewhat narrowed behind; sides slightly sinuate in hind half; each median row of discal punctures consisting basically of 8 coarse punctures, but the punctures rather variable in number (about 6 to 10) and arrangement; superior lateral line in dorsal view visible about hind half.

Scutellum much more finely and densely punctured than on elytra, with distinct linear microsculpture.

Elytra distinctly but not wholly flattened as in *amamiensis*, a little more coarsely and densely punctured than in *spadiceus*.

Abdomen a little more coarsely and densely punctured than in *spadiceus*.

Protibiae strongly thickened apicad; protarsi considerably dilated in basal 3 segments, slightly but distinctly narrower than apex of the tibiae as in the preceding species.

Male genitalia (figs. 29 and 30) elongate, symmetrical; penis slightly tumid at base and at apical third, a little more gently narrowed to rounded tip than in *spadiceus* and projecting as a protuberance at the middle of ventral side as in *spadiceus*, ventral side sharply edged at sides from the projection toward apex; parameres fusiform, long, a little longer than a half length of penis, much wider and longer than in *spadiceus*, with a pair of long hairs at tip and about 4 fine soft hairs at apical fifth of ventral side.

Female: Protarsi much less widened than in the male.

Length: 7.3-9.1 mm.

Holotype: ♂, Pinglin, Taipei Hsien, Taiwan, 8. VIII. 1974, Y. KIYOYAMA leg. (in coll. T. SHIBATA). Allotype: ♀, paratypes: 8♂♂, 8♀♀, same data as the holotype; 1♂, Juisui, Taiwan, 4. IV. 1974 (at light), S. TAKEDA leg.

Distribution: Taiwan.

The present species is closely related to *Ph. spadiceus* by the same reason as in the preceding species, *Ph. amamiensis* sp. nov.

The present species differs from *amamiensis* in the following points: head more numerously punctured, therefore impunctate space on vertex much narrower; each median row of punctures on pronotum more abundant, about 8 in number; apex of penis less narrowed, and parameres more strongly dilated in middle; elytra and abdomen a little more coarsely and densely punctured.

Key to the species of *Philonthus prolatus*-group

1. Head sparsely punctured on supraorbital space (about 7 in number); the 4th antennal segment as long as or slightly longer than 5th; elytra not flattened,

more or less convex ………………………………………………………… *prolatus* SHARP

— Head rather numerously punctured on supraorbital space (more than 15 in number); the 4th antennal segment slightly but apparently shorter than 5th; elytra conspicuously flattened ……………………………………………………………2

2. Head widely impunctate on vertex; pronotum parallel-sided, with straight lateral margins and with each median row of 8 coarse punctures; eyes slightly longer than postgenae ……………………………………………………………… *spadiceus* SHARP

— Head rather narrowly impunctate on vertex; pronotum a little narrowed behind, with feebly sinuate lateral margins ………………………………………………………3

3. Head very narrowly impunctate on vertex, the impunctate space about one-third as wide as the width between eyes; eyes as long as postgenae; pronotum with each median row of 8 coarse punctures …………………………… *kiyoyamai* sp. nov.

— Head less narrowly but not widely impunctate on vertex, the impunctate space nearly half as wide as the width between eyes; eyes small, shorter than postgenae; pronotum with each median row of 7 punctures ……… *amamiensis* sp. nov.

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ベニバネフトヒラタコメツキの形態について

大　平　仁　夫

Notes on the Morphological Structure of *Acteniceromorphus chlamydatus* (Lewis, 1894) (Coleoptera, Elateridae) from Japan

By Hitoo Ôhira

本種は，G. Lewis が1881年5月に熊本県湯山において自身で採集した1頭の雄標本にもとづき，1894年に *Corymbites chlamydatus* と命名して新種の記載をした上翅が朱赤色の美麗種である．本種のタイプ標本は現在 British Museum (N. H.) に保管されており，その実体については大平 (1973) が報告したとおりである．日本には本種に類似した種が他にも分布しているので，ここに本種の詳しい形態を明らかにすることにした．

分布・生態の概要

本種の完模式標本の産地は前述のように熊本県湯山であるが，その後，九州の各地，四国，本州の関東北陸以西の各地から記録されており，記録上での最も北の産地は新潟県である．東北地方や北海道からはまだ知られていない．

成虫は春に出現し，平松 (1977) によれば和歌山県護摩ノ壇山では5月中旬頃から6月上旬頃にかけて発生し，カエデやミズキの花上で得られると記している．また，有本 (1988) は長野県では4月から6月頃にかけて出現し，花や新芽に集まることを記録している．その他，大平・島地 (1975) は三重県平倉演習林で1968年4月4日に1雄個体が燈火に飛来したことを報告している．これらのことから，本種はドウガネヒラタコメツキ *Corymbitodes gratus* によく似た習性を有するようであるが，得られる個体数が少ないこともあって，詳しいことはまだ充分にはわかっていない．幼虫も不明である．

形態の概要

雄．体長は12-13 mm．体はやや扁平で両側は平行状である．光沢を有し，頭部，前胸背板，小楯板，体下面などは黒色で鈍い真鍮色の金属光沢を有する．上翅は朱赤色である．触

〔昆虫学評論，第48巻，第1号，83-85頁，第8図版，7月，1993年〕

角は黒色で，肢は黄褐色，腿節と跗節は暗褐色を呈する．

頭部は弱く膨隆し，前頭部は扁平で，前頭横隆線は中央部で強く抑圧されて不明瞭となる (Pl. 8, B)．触角は細長く，末端1-2節ほどは前胸背板の後角より後方に伸長する (Pl. 8, A)．第2節は短小で幅よりやや長く，第3節は細長い円錐形状で第4節とほぼ等長である (Pl. 8, C)．

前胸背板は矩形状で両側は平行状，背面の正中部は浅く凹溝状を呈する．表面には円形の点刻をやや密に一様に分布し，点刻と点刻の幅は点刻の直径よりややせまく，表皮面は平滑である (Pl. 8, F)．後角は後外方へ鋭く突出し，背面には弱い1隆起線を有する (Pl. 8, Eの↑印)．前胸腹板突起は細長く，前肢基節腔を越えて直線状に伸長，末端は細まってとがる (Pl. 8, D)．小楯板は扁平で細長い舌状である．上翅の条線は浅く印し，深い点刻を規則的に生ずる．間室部は弱く膨隆し，小点刻を生じ，不規則な横しわ状である．

交尾器の背面からみた外形は図示したようである (Pl. 8, G)．中央突起は細長く，末端部の両側は弱く内方へ彎曲，末端は鈍くとがる (Pl. 8, I)．側突起の外側部は弱く外方へ彎曲して末端へ細まり，末端は鋭くとがる (Pl. 8, H)．

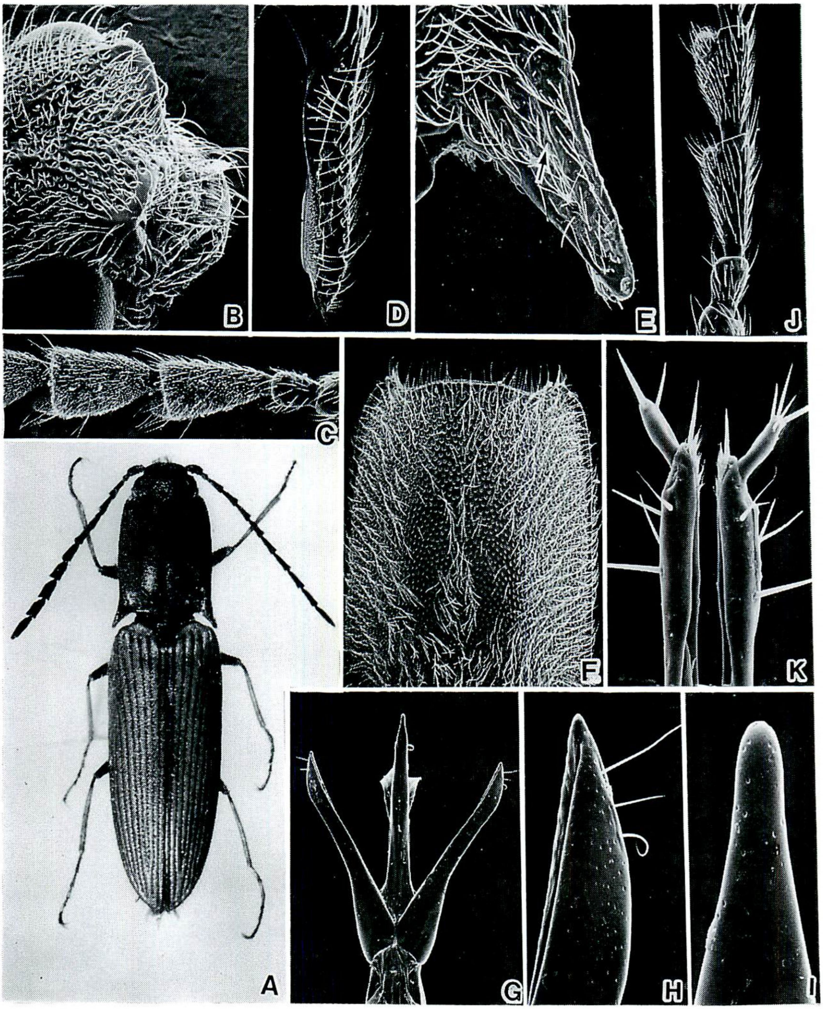
雌．体長は14 mm内外・体はやや幅広い．触角は短く，末端は前胸背板の後角に達しない．第3節は細長く，第4節より明らかに長い (Pl. 8, J)．産卵管の外形は図示したようで，末端の1対の styli はよく発達している (Pl. 8, K)．また，内部生殖器の袋内には角質化した板状物は有さない．

調査標本

1♂，福岡県犬鳴山，2. IV. 1961，明石採集；1♂，長野県扉鉱泉，21. V. 1962，出雲採集；1♂，三重県平倉演習林，4. IV. 1968，島根採集(図版の成虫)；1♂，1♀，山梨県大菩薩峠，13. IV. 1975，佐藤採集 (図版の SEM に使用)；1♂，愛知県三河本宮山，17. IV. 1977，松野採集；1♂，三重県平倉演習林，21. IV. 1990，川瀬採集；1♂，1♀，高知県檮原町，21. IV. 1992，吉永採集．

あとがき

Gurjeva (1989) の研究では *Acteniceromorphus* 属は *Liotrichus* 属の亜属とされているが，再検討の必要があるのでここでは従来の位置に従っておく．本種の一般外形はアカハネフトヒラタコメツキ *A. fulvipennis* (Lewis, 1894) にきわめてよく類似しており，両種間の識別については大平 (1973) に示したとおりである．しかし，本種 *A. chlamydatus* の主要分布地は本州の西部地域であるのに比して，後種 *A. fulvipennis* の主要な分布地は本州の東部地域 (中部地方から東北地方) である．また，前種は比較的低地でも得られているのに比して，後種は山地性のようである．これら両種の生態や分類についてはさらに研究を進めなくてはならないと思われる．



(H. Ôhira photo.)

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Summary

Acteniceromorphus chlamydatus (Lewis, 1894) was originally described from Yuyama in Kumamoto Pref. of Kyushu based on one male specimen.

Some important structures of this species by SEM-images are shown in the Plate 8 to facilitate its recognition in the fauna of Elateridae from Japan.

Explanation of Plate 8

Pl. 8. *Acteniceromorphus chlamydatus*. A, male, Hirakura in Mie Pref.; B-I (male) and J-K (female), Daibosatsu-tôge in Yamanashi Pref.

A, Adult, length 11.5 mm; B, Fronto-clypeal area of head, latero-dorsal aspect; C & J, 2nd to 4th basal segments of antenna; D, Prosternal process, lateral aspect; E, Apical portion of right hind angle of pronotum, dorsal aspect; F, Anterior portion of pronotum, dorsal aspect; G, Aedeagus, dorsal aspect; H, Ditto, apical portion of right lateral lobe, dorsal aspect (enlarged); I, Ditto, median lobe (enlarged); K, Apical portion of ovipositor.

第44回（平成4年度）大会記録

平成4年度の第44回大会は，同年12月13日午前10時30分から大阪市立自然史博物館集会室において開催され，午前中は例年どおり自由懇談及び甲虫の同定が随所で行われた.

午後1時から大会に入り，まず大倉幹事から会務会計報告並びにジョージ・ルイス顕彰事業が無事終了したことのお礼の言葉があった後，記念講演が行われた．最初に松田潔・有本久之両氏による“ジャワ島西部の甲虫採集”についてスライドを用いて話があり，次いで大石久志氏から“アリヅカムシの口器について”と題し，アリヅカムシの口器の一般的構造及び各群の特長につき説明があった後，各群について詳細な話があり，その中では感覚器特に小腮鬚，下唇鬚，上唇の順に著しく変化するとのことであった．最後に林匡夫氏から“中国・台湾の天牛”について，中国には約1,900種，台湾には我国とほとんど同数の約800種を産するが，今回は特に中国四川省に産する若干の珍しい種について興味深い話があり，盛会裡に午後4時30分に終了した.

引続き有志による恒例の懇親会を開催し，和気藹藹裡に解散した.

当日の出席者（敬称略，＊は懇親会出席者）は下記のとおり.

有本久之・*安藤清志・*藤田國雄・*春澤圭太郎・*林　匡夫・*林　靖彦・平田信夫・穂積俊文・*生谷義一・岩田隆太郎・蟹江　昇・河上仁之・川瀬英夫・岸井　尚・北山　昭・黒田祐一・*的場　績・松田　潔・三木三徳・*水野弘造・中田勝之・*奈良　一・生川展行・*野村英世・*野村　全・越智輝雄・*大石久志・*大川親雄・*大倉正文・*大本德造・奥田則雄・斉藤昌弘・*佐々治寛之・*澤田高平・田花雅一・*高羽正治・*田中昭太郎・谷角素彦・渡辺昭彦・*八木正道・山地　治・吉田正隆・*吉田元重.（大倉）

(from p. 44)

1710 J. C. Megerle's (1801-1805) auction catalogues of insects: suppressed for nomenclatural purposes, with the specific names of *Saperda alboguttata* Megerle, 1803 (currently *Apomecyna alboguttata*; Coleoptera) and *Hippobosca variegata* Megerle, 1803 (Diptera) conserved.

1711 *Chrysops atlanticus* Pechuman, 1949 (Diptera): specific name conserved.

1712 *Drosophila hydei* Sturtevant, 1921 (Diptera): specific name conserved.

1713 Some bee family-group names (Hymenoptera): names based on *Colletes* Latreille, 1802, on *Paracolletes* Smith, 1853, on *Halictus* Latreille, 1804, on *Anthidium* Fabricius, 1804 and on *Anthophora* Latreille, 1803 given precedence over some senior names.

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Eisai
エーザイ

一日いれば、くすり博士。

（エーザイの「くすり博物館」には約27、000点の資料、約23、000冊の蔵書があります。）

木曽川の中州にひろがる、緑豊かな自然林に囲まれたエーザイ川島工園。公園のような工場という意味で〈工園〉と名づけられた14万坪の敷地の一隅に、日本で唯一の総合的な薬の博物館があります。ここには、薬や医学の歴史を物語る貴重な、珍しい資料がたくさん展示されているほか、付属の薬用植物園もあり、楽しく見ているうちに薬や健康に関する知識を深めることができます。

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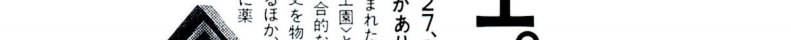

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